ABSTRACT OF

The Harveian Lectures

ON

THE TREATMENT OF SURGICAL TUBERCULOUS AFFECTIONS.

Delivered before the Harveian Society of London

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LECTURE I.[1]

Delivered on Dec. 7th, 1899.

IN the first place the lecturer discussed some points with regard to the pathology of tuberculous diseases in general which were of importance as regards treatment, more especially the questions of the local nature of the disease and the mode of origin of the deposits. It was pointed out that in the early stage all tuberculous diseases were localised and that it was only after a time that more general diffusion of the trouble occurred. In a certain number of cases there could be no question about the primary origin of the lesions, but in the deeper-seated troubles it was difficult to say in many cases whether these were primary or whether they were secondary to tuberculous deposits elsewhere. No doubt in the majority of instances these deeper-seated deposits were secondary, but in some no other focus of disease could be found in the body, and they must be regarded as primary. Mr. Watson Cheyne thought that where a lesion remained for a long time single it was probably a primary deposit, while, on the other hand, multiple lesions or lesions following one another in fairly rapid succession were probably distributed from some primary lesion elsewhere. The importance of the point was with reference to the question of the early and complete removal of these tuberculous deposits, for if they were primary the sooner and the more completely they were removed the better, whereas if they were secondary the condition was quite different and in many cases the treatment must be limited to trying to improve the local lesion. It was also pointed out with regard to the operative procedures that while the most satisfactory method was complete removal of the whole tuberculous deposit, yet in many cases such removal was not possible, or if it was possible was not always desirable, and in some of these even a partial removal led to a subsidence of the disease. Examples of this would be given during the course of the lectures. The lecturer then went on to the chief subject of his first lecture—namely, tuberculosis of the lymphatic glands—and he limited his attention essentially to tuberculosis of the lymphatic glands in the neck, which of the glands accessible to surgical treatment were by far the most commonly affected. He continued:

In the neck the most frequent seat of tuberculous glands is the anterior triangle, especially towards the upper part; the next most frequent the posterior triangle, and then the submaxillary triangle. With regard to the onset of tuberculosis in the cervical glands it is often associated with some inflammatory condition about the terminals of the lymphatics, such as tonsillitis, carious teeth, otorrhœa, eczema capitis, &c., and it is usually assumed that the bacilli enter at these points and are carried to the glands and then set up disease. As tuberculous ulceration is very seldom found in connexion with these primary irritations it is further assumed that the bacilli enter without producing a primary local tuberculosis and that they are first deposited in the glands. This view rests very much on experiments by Klebs, in which it was found that if animals were infected with coarse tuberculous material a local ulcer occurred at the point of entrance, while if the bacilli were free, as in milk, no local lesion could be made out, but, on the other hand, general infection might occur. This view has, however, not been altogether upheld by subsequent research, Baumgarten and Tangel, for instance, finding that in the great majority of cases (39 out of 40 experiments) a local lesion, although quite small, was really produced at the point of entrance. One of the most frequent of these irritations leading to tuberculous glands is carious teeth and it is assumed that the bacilli enter at that part; but when the carious stump has been removed the cavity heals completely and practically almost never is there any trace of tuberculous ulceration, as one would naturally expect had the tubercle bacilli entered there. They are also said to enter through the tonsils without producing any disease in the tonsils. With regard to this, however, numerous investigations have been made in cases of phthisis, as the result of which it has been found that tuberculosis of the tonsils is very common in the form of tuberculous nodules in the tonsil, and, nevertheless, glands in the neck are not frequent in phthisis. On the other hand, a few investigations have been made with regard to the state of the tonsils in cases of tuberculous glands in the neck where phthisis was not present; and in the most recent investigations mentioned by Dr. Craven Moore in his paper in the *Journal of Pathology* the tonsils examined in 17 cases of tuberculous glands without phthisis were in all instances free from tuberculosis. Beyond Klebs's experiments there is no proof of the theory that the bacilli lodge in the crypts of the tonsils, penetrate through the mucous membrane, are seized by phagocytes, and carried on to the lymphatic glands; on the contrary, the researches in the case of phthisis show that where they do enter from the tonsils they generally produce a local lesion. In the cases of tuberculous glands secondary to ear disease, as the latter are very frequently tuberculous, there is no reason to doubt that they enter from that part. The question is, however, more doubtful as regards eczema capitis, for although some have asserted that bacilli are present in the eczematous patch and that it is really a tuberculous eczema others have failed to confirm this view.

[The lecturer's conclusion was that although in some cases there might be a direct infection of the glands from the throat or other region in the vicinity, still in a considerable number of cases this was not the etiology; that a more probable etiology in many cases was that the trouble in the throat or teeth, &c., led to true acute inflammation of the glands and that as this subsided the glands which had been thus weakened as regards their resisting power became infected by the deposit of bacilli from the blood, just as in the case of joints when tuberculosis occurred after a sprain and where the tubercle bacilli did not of course enter from without at that time but where undoubtedly the tissues were weakened as the result of the injury and the bacilli subsequently deposited from the blood. In considering the treatment of tuberculous glands in the neck an attempt was made to divide the cases met with into several groups according to their clinical characters and to point out the suitable surgical treatment for these cases, medical treatment being of course employed either previously to the surgical treatment or in some cases altogether. The cases were divided into the following five heads:—]

1. In some cases the glands remain small and hard, not large enough to produce deformity, and with no marked tendency to softening. Here is usually found a number of glands of varying size, but for the most part small, hard, moveable, and without any matting together; fresh glands tend to become involved, though slowly, and unless there is any intercurrent trouble, such as sore-throat, or some general disease, such as measles, &c., they tend gradually to disappear as the patient becomes older. Where, however, intercurrent troubles occur suppuration may take place, when the whole trouble may take on a more acute course. As regards the treatment of these cases they may well be watched for a time and treated with the ordinary medicinal means, more especially arsenic, country air, good hygienic conditions, &c., and unless the disease becomes active, which is most usually the result of some intercurrent affection, there is as a rule no necessity for surgical interference.

2. In a second set of cases the glands enlarged steadily, or it might be by fits and starts, attain a large size and become very numerous, so that by-and-by the whole side of the neck presents a mass of enlarged glands which cause great deformity. This condition is usually bilateral, although it is generally more marked on one side than the other, and it may go on for a long time without the occurrence of suppuration, the glands remaining more or less mobile and discrete. The glandular disease tends steadily to spread, the axilla becomes involved, and the patient generally

[1] Lecture II. was delivered on Dec. 14th and Lecture III. will be delivered on Dec. 21st.

suffers somewhat in health. These glands when removed are often found to be converted into masses of cheesy material. Other glands, however, may show only small caseous patches or calcareous nodules, while others, again, appear fleshy on section to the naked eye without any sign of degeneration; in these latter, however, one finds on microscopical examination that tubercles and tuberculous tissue are present throughout. As regards the treatment of this class of cases operation is generally requisite; a trial of the general hygienic treatment and arsenic and cod-liver oil, &c., may be made, but if the glands continue to enlarge it is better to resort to operation. It is not advisable in these cases to wait too long, for the tendency is to progressive infection of the glands, and country air and other expectant means have but little influence on them. The only operative procedure possible here is complete excision, and this excision should be especially free and should not only consist in the removal of the enlarged glands but also in the removal of all the interglandular fat and smaller glands.

3. A third variety is where the glandular trouble is more acute and more likely to end in suppuration. Here in the first instance the disease may be limited to a few glands, which, however, enlarge pretty rapidly. Peri-adenitis occurs, the glands tending to become more or less matted together and adherent to the tissues around, while fresh glands enlarge in the vicinity. On examining these glands we generally find that there is rapid caseation occurring and suppuration will in all probability take place. If left to themselves abscess after abscess may form till numerous ulcers are present, often extending around the neck and downwards along the triangles. In this group the occurrence of peri-adenitis shows that active inflammatory processes are going on, and while the glands may sometimes subside after careful expectant treatment the progress of the case must be especially closely watched and, if no improvement follows, operative treatment should be carried out before a definite abscess has formed. In these cases some surgeons adopt scraping, others free excision; and I have no hesitation in expressing my very decided preference for the latter course, and that for the following reasons. In the first place, it is seldom that only one gland is enlarged and scraping will only affect the individual gland penetrated by the instrument; it is of course possible to push the instrument on into other glands, but the result is not very satisfactory and the smaller glands which are also affected are left untouched. Besides, even as regards the glands which are scraped out it is often difficult, unless they are very much broken down, to clear them out completely, and thus tuberculous material is very apt to be left behind, which again rapidly grows and infects the wound and leads to recurrence. The smaller glands soon enlarge and so a mass is again formed as large or larger than the original one. Indeed, it is probable that the irritation of the scraping increases the inflammation and leads to this more marked enlargement. In a certain number of cases also acute general tuberculosis has followed scraping. On the other hand, the results of excision are as a rule highly satisfactory, provided that the operation is sufficiently extensive to remove the fat and smaller glands in the neighbourhood. I have seldom seen recurrence after these operations when they have been completely carried out. It is also very important in all these cases to look for and remove the possible primary source of irritation, such as enlarged tonsils, carious teeth, mastoid disease, &c.

4. We may have to deal with tuberculous glands with unopened abscesses. Suppuration in connexion with tuberculous glands may be met with under various conditions. Most commonly the state of matters is that described under No. 3, but in some cases the disease may be much more limited and only one gland or one or two smaller glands may break down. These cases may be divided into those where the abscess is still beneath the deep fascia and those where it has burst through and forms a subcutaneous swelling often with thin skin over it. Again, in some cases the gland may be only partially broken down and a large quantity of cheesy material and diseased glandular tissue is found at the bottom of the cavity when the abscess is opened. Or, on the other hand, the gland may have completely broken down and we practically only have a bag of pus. The latter condition is seldom found except where the abscess has not yet perforated the fascia, usually where it lies beneath the sterno-mastoid muscle. Where the abscess comes quickly through the fascia it generally bursts before the gland has been completely destroyed. From the point of view of treatment these cases may be divided into three groups. (1) The abscess in the gland has burst through the fascia but only forms a comparatively limited swelling under the skin. In these cases complete excision of the glands, the abscess, &c., must be advocated, an oval piece of skin being taken away over the abscess, and care being taken as far as possible to avoid puncturing it during the operation. In these cases it is frequently necessary to remove the internal jugular vein along with the mass. (2) The abscess in the gland has burst through the fascia and forms a large swelling in the skin with marked thinning of the skin over it. Under these circumstances the removal of the whole of the thin skin, which would be necessary in complete excision, would leave a gap which it is difficult to close and the scar of which would be apt to stretch afterwards. Hence I prefer in these cases to open the abscess in the first instance, and then in three or four weeks' time when the skin has recovered and only a sinus is left to carry out complete excision if it is necessary. In some cases the gland and abscess may be scraped out in the first instance, instead of merely opening it, and it may be that this will suffice for a cure; but if after the end of three or four weeks swelling is still left it is better to perform complete excision. (3) An abscess is present which has not yet burst through the fascia. Here we may wait and allow the abscess to increase till it is probable that the gland has become completely broken down, and then it may be opened and scraped out, iodoform and glycerine emulsion injected, and the wound stitched up. In these cases a very small incision behind the sterno-mastoid suffices and the resulting scar is practically invisible. Such cases are, however, not very common, and should it be found after an operation of this kind that a sinus remains and fresh glandular enlargement occurs excision should be performed.

5. Lastly, we may have to do with cases where abscesses have burst or have been opened and where sinuses remain. These sinuses may vary in number; they usually lead down through a hole in the fascia to the remains of the gland, and as a rule there is a quantity of cheesy and calcareous material and broken-down gland tissue at the bottom. In addition, the orifice of the sinus practically becomes a tuberculous ulcer with undermined edges. Here, also, excision is the best treatment unless the sinuses are so numerous that such an operation is not practicable. Excision is, no doubt, somewhat more difficult than in the former cases, but if it be carried out in the systematic manner described it can always be accomplished. Where, however, the sinuses are too numerous or too widely scattered for excision they should be thoroughly scraped out and undiluted carbolic acid applied to the track.

After discussing the medicinal treatment of tuberculous glands and the relative advantages and disadvantages of excision on the one hand and scraping on the other, the lecturer went on to the consideration of the operation of complete excision of the tuberculous glands. He pointed out that it was very necessary that, with the view of preventing recurrence, such an operation should be free, that if the enlarged glands alone were removed recurrence was very apt to take place, and that if such recurrence took place subsequent attempts at excision became very difficult; in fact, the subsequent surgical procedures must almost inevitably consist in scraping. He emphasised the fact that it was not merely the visibly enlarged glands which were infected, but that others which were smaller and could not be made out were also involved, and unless the latter were taken away they were very apt to enlarge subsequently and to lead to recurrence. Furthur, that these smaller glands could not be satisfactorily removed unless the fat in which they were embedded was also taken away. Hence, where glands were removed for tuberculous disease all the fat containing small glands in that particular lymphatic area, in addition to the larger ones, must be mapped out and removed. Mr. Watson Cheyne continued:

The situation where operation has most commonly to be performed is the anterior triangle of the neck, and there must be removed not only the fat and glands present in the anterior triangle of the neck, leaving the vessels, nerves, and other structures thoroughly clean, but if recurrence is to be avoided it is very important that the sterno-mastoid should be pulled aside and the fat and glands which lie underneath it also taken away. Indeed, from this wound a considerable part of the posterior triangle can also be cleared out and thus a second incision behind the sterno-mastoid may frequently be avoided.

The incision in these cases may consist either of a vertical incision along the anterior border of the sterno-mastoid; or where the glands are more limited of a curved incision running in the lower fold of the neck; or again, in the extensive enlargements described under the second heading, of the horse-shoe shaped incision introduced by Dr. George Beatson of Glasgow. Having made the incision, the anterior edge of the sterno-mastoid is first defined and then the structures superficial to the deep fascia are cleared inwards till the whole of the upper part of the anterior triangle covered with the deep fascia is exposed to view. The key of the operation is the exposure of the jugular vein at the lower part. The difficulty into which the operator is apt to get is chiefly connected with the internal jugular vein and its branches, and unless its situation is clearly defined at an early stage in the operation it is very apt to be torn or punctured and so the field of operation obscured by blood. This trouble is avoided if, having turned aside the skin, the deep fascia is divided below the glandular enlargement and the jugular vein is exposed and the sheath of the vessel opened; by means then of a separator and subsequently of the finger the tissues in front of the vein can be pushed forward and the vein pushed backwards, and then the whole tissues in front can be removed, including the whole glandular mass. At the very lowest part of the wound an incision is then made through the deep fascia close to the edge of the sterno-mastoid muscle and the jugular vein is defined. This is the key of the operation; the glands always lie close to the jugular vein and are often adherent to the sheath of the vessel, and if an attempt be made to cut them out without previously seeing the vein a great deal of trouble may be occasioned. But by beginning at the lower part below the area of enlargement of the glands and exposing the vein and stripping up the common sheath any subsequent injury to the vein may be avoided. Having exposed the vein and divided the sheath a separator can be insinuated, and in many cases also the finger between the sheath and the mass of glands. Where the vein is very adherent, and especially where the glands are very much matted together and suppurating, the operator is very apt to fail in getting the mass properly away by trying to peel it off from the jugular vein, and under these circumstances the best plan is, having exposed the vein at the lower part, to ligature it in two places and divide it between the ligatures, then picking up the lower end of the upper part of the vein to insinuate the finger behind it so as to separate the vein along with the mass of glands forwards from the artery and vagus nerve. The loss of the jugular vein apparently does not make the slightest difference to the patient and it makes all the difference as regards the ease of the operation and also as regards the subsequent freedom from recurrence. Hence, probably in the majority of cases—in all cases where there are sinuses and practically all cases where suppuration is present—I make a point of dividing the vein between two ligatures and taking it away along with the mass of glands. Having insinuated the finger either behind the vein or, if it is to be left, between it and the mass I proceed next to define the inner border of the anterior triangle. This can usually be readily done as the matting is generally more or less limited to the outer part, and by peeling the fat and glands forward from the carotid artery one can usually begin to divide the tissues upwards at the level of the side of the larynx. One or two large veins—namely, the superior thyroid, the lingual and facial veins—will be met with, and if the vein is being taken away they must be clamped. These are freed and clamped in two places and then divided, the parts of the veins which run into the jugular vein being turned back with the mass. When the mass is turned outwards the vein can be seen running on its inner surface in cases where it has been divided below, and it should then be defined at the upper part, a ligature passed around it and tied as high up as possible. The vein is then divided below that point and the intermediate portion comes away with the mass. The descendens noni nerve can be preserved quite easily.

The next step in the operation is to ascertain the position of the spinal accessory nerve. This is usually readily done by turning back the edge of the sterno-mastoid and peeling off the fascia from its deeper surface; the point of entrance of the nerve towards the upper part is very soon found, and then the probe end of the separator can usually be passed upwards along the nerve, which often runs through the glandular mass, and thus its course may be defined exactly. In most cases it will be found that the mass of glands is divided into two parts by the spinal accessory nerve; the largest mass is usually below it, but there is generally also a considerable mass above the nerve. Having defined the nerve the operator tears asunder the glands over it so as to expose it throughout its whole extent, and then, keeping the nerve in mind, he proceeds to separate the glands at the upper part. In this region it will usually be found that the mass is fairly firmly attached to the fascia over the transverse process of the atlas. This should be next divided and then the glands and fat can be pulled down. In some cases where this forms the chief part of the tumour this is not so easily done, and Mr. H. J Stiles suggests that the sterno-mastoid muscle should be divided at the upper part in such cases so as to expose the region thoroughly. This certainly gives excellent access to all the tissues underneath that muscle and is of especial value in the removal of malignant glands. Having separated the glands in this situation the operator continues with the finger and dissector to bring down all the fat and glands beneath the muscle as far back as the upper part of the posterior triangle. Usually, having separated the glands from over the transverse process of the atlas, the glands further back along with the fat can be readily peeled down. This peeling down of the fat and glands beneath the sterno-mastoid muscle is continued until they can be pulled down below the spinal accessory nerve. Having once drawn the mass underneath the spinal accessory nerve the sterno-mastoid is pulled outwards and the nerve upwards, and then the operator proceeds to clean the under-surface of the sterno-mastoid muscle and the muscles beneath it so as to remove the whole mass of fat and glands in one piece. It is well, after having cleared the tissues for some distance, to ascertain the point of exit of the branch of the spinal accessory nerve which runs across the posterior triangle to the trapezius muscle and to take care to preserve this from injury. In this way may also be pulled out a quantity of glands and fat from the posterior triangle, and this should always be done whether they are affected or not. When the mass is removed a clean dissection of the anterior triangle and the parts underneath the sterno-mastoid muscle should be seen. In some cases glands are also present beneath the vessels and in peeling off the vein it is well to try to take these along with it; if not, they should be removed subsequently, and investigation should always be made to ascertain whether there are or are not glands in this situation.

If the operator proceeds in this methodical manner the chances of recurrence in the anterior triangle are extremely slight, as all the glands are removed. Recurrence may take place in the posterior triangle lower down or anteriorly in the submaxillary triangle, but recurrence rarely, if ever, takes place in the anterior triangle itself, more especially in the cases where the vein is removed along with the other tissues.

It is well to bear in mind one other point—namely, towards the upper part of the incision one is very apt to catch a little twig of nerve which runs down under the jaw to the lower lip. The result is that there is paralysis of a little bit of the lower lip close to the angle, so that when the patient speaks or laughs the lower lip goes rather to the other side. This trouble can hardly be avoided in bad cases, but the patient may make his mind quite easy about it because I have never seen recovery fail to take place. In two or three months the whole thing has disappeared again and I believe the trouble is more often due to the division of the platysma than to division of the nerve, and when the platysma has firmly united again and the scar is getting loose recovery is, as I have said, complete. So that although it is a thing which it is well worth trying to avoid, yet if it does happen it is not an occurrence which need give one the slightest anxiety. In cases where the gland has undergone suppuration and the skin is quite thin, if the abscess is not large it is well to include the thin skin in the incision and to avoid as far as possible rupturing the abscess cavity while dissecting out the gland.

In cases where the abscess is large, the lecturer pointed out, it is well to divide the operation into two stages, in the first place opening the abscess and draining it, and then in the course of three or four weeks performing excision in the way just described. Where sinuses are present the operation should commence by scraping out the orifice of the sinus and sponging the surface with undiluted carbolic acid, the sinus being subsequently enclosed in an oval incision and removed. Some further remarks were made with regard to operations in the posterior triangle and in the submaxillary region.

CALCULUS IN THE URETER.

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BY ureteral calculus, or calculus in the ureter, is meant a calculus which, formed in the kidney, has become impacted in the ureter. Renal calculi, while yet small, and especially if their surfaces are smooth or if the ureter has been previously dilated, frequently pass along the ureter to the bladder without causing any trouble. On the other hand, their passage is in some cases attended by the most severe suffering and the impaction of a stone so small as to weigh less than two grains may completely destroy the kidney (Fig. 1) or

FIG. 1.

A pyonephrotic kidney due to calculi of minute size blocking the upper end of the ureter (author's case).

excite symptoms of the most violent character ending even in fatal collapse. If the stone reaches the bladder all distress ceases, at any rate for a time, and it either remains in the bladder and becomes a nucleus for a larger concretion or later becomes impacted in the urethra, or, more happily, is discharged out of the body with the urine. In males it is very commonly retained in the bladder or, but far less frequently, in the urethra. In women, if it reaches the bladder it almost always escapes by the urethra, and this explains the great difference in the frequency with which vesical calculus is met with in the two sexes. This difference does not exist in renal and ureteral calculus. Out of 47 cases of ureteral calculus referred to in the accompanying table 27 were in females, 18 were in males, and in two cases the sex is not stated.

ETIOLOGY.

Stones in the ureter descend from the kidney and their impaction is due to their volume or their irregularity of shape and roughness of surface. In the first place, the spasmodic contraction of the muscular coats of the ureter, provoked by their presence, and at a later period the inflammatory swelling and ulceration of the mucous membrane add to the difficulty of their progress towards the bladder. Should the irritation lead to thickening, rigidity, or stenosis at the seat of impaction the stone will remain permanently fixed.

Calculous concretions formed *primarily in the ureter* are very rare. When they occur they are composed of phosphatic salts deposited above a stricture, or upon an ulcer of the ureter, or upon a foreign body within the ureter such as a catheter *en demeure*.

Duration of impaction.—When a calculus becomes impacted in the ureter it may remain there if not extracted by the surgeon for an indefinite time or altogether. It must not, however, be inferred when a stone is discovered in the ureter that it has been there for the whole or the greater part of the time since the onset of the symptoms. It may have been in the kidney for the greater part of the time. With our present knowledge it is impossible in most cases to diagnose between a stone or other cause of obstruction in the renal pelvis and the same condition in the ureter.

Negative explorations of the kidney followed after a time by the discharge per urethram of a small calculus afford us some evidence as to the length of time during which a calculus may remain in the ureter before being passed naturally, though this evidence is not precise as to the exact duration of impaction. During the 19 years since my first renal operation I have in six cases explored without finding a stone in the kidney, though in each case a stone must have been present in the ureter at the time of the operation. Five out of six of these patients subsequently passed a calculus and one died more than 12 months after the operation and a stone was found at the post-mortem examination impacted near the vesical end of the ureter on the side which had been explored. In one of the five surviving cases two small calculi were passed during convalescence. In another the right kidney was explored on March 26th, 1890, and a small renal calculus was passed in June, 1891—i.e., after an interval of 15 months from the exploration. Then followed a period of 18 months of complete immunity from symptoms, but in January, 1893, the patient was seized with intense pain and hæmaturia and this attack was followed by other similar attacks up to Dec. 6th, 1897, when I again explored the same kidney and removed a large calculus from the renal pelvis and at the same time performed uretero-lithotomy for a small calculus which was completely blocking the ureter at a point about one and a half inches above the brim of the bony pelvis (No. 40 in the subjoined list). From the large size of the stone which occupied the renal pelvis it is certain that the stone in the ureter must have been lodged there for many months at least. The kidney was greatly disorganised. In each of the three other cases the kidney was moveable; complete exploration was made of the kidney with negative results and yet a calculus was passed by each patient, attended by pain on the side operated upon, at periods of nine months, thirteen months, and five and a half months respectively after the operation. There is good reason to believe that in each of these three cases the kidney afterwards resumed its function perfectly.

In all these six cases the kidney was taken out upon the loin, inspected, and palpated; in five of them the kidney was opened along its convex border and a most thorough exploration was made with the finger within the organ. It is not possible that the calculus could have been missed had it been in the kidney or infundibulum at the time of exploration. From the continuance of the same symptoms after as before the exploration and the complete and lasting relief which followed the passing of the stone there is no escape from the conclusion that the stone was impacted in the ureter at the time of the exploration. Some time before the last of these cases occurred I had commenced what is now an invariable rule with me—namely, sounding the ureter in its whole length before completing the operation. In this case I detected an obstruction in the ureter some distance below the brim of the bony pelvis, but for reasons which I thought sufficient at the time, and which I need not here mention, I did not explore the ureter at the seat of obstruction, though it would have been better if I had done so. After five and a half months, having in the interval suffered repeated attacks of severe pain over this spot, the patient passed a small ovoid calculus (Fig. 2) and he has been quite well ever since.

FIG. 2.

Calculus impacted in the pelvic part of the ureter and subsequently passed naturally (author's case).

Facts of this kind inform us that a calculus may remain in the ureter for a long time and after escaping may, as we know from the results of various experiments and from abundant clinical experience, leave the obstructed kidney still capable of discharging its functions provided the obstruction has not been complete.

Position of impaction.—It is a matter of great importance from a surgical point of view to know at what points in the ureter impaction occurs. In the normal ureter the smallest diameters are found, first at a point about five or seven centimetres (from two to two and a half inches) from the hilum of the kidney, and one or two centimetres below the commencement of the ureter; secondly, where the ureter enters the wall of the bladder, and especially at its termination on the mucous surface of the bladder; and thirdly, there is another but a slighter narrowing (in three out of five subjects) where the ureter *crosses* the brim of the bony pelvis. It is at one or other of these points that calculi are more usually arrested, but they may become lodged at other points (Fig. 3).

In some of the recorded cases of uretero-lithotomy the calculus has been found impacted a little below the brim of the pelvis. This is a portion of the ureter which is comparatively wide and has a slight fusiform dilatation, and therefore a stone which has traversed the upper aperture might be expected not to lodge here. The explanation of its doing so is no doubt to be found in the curved direction rather than in the size of the tube at this part of its course.

FIG. 3.

Oval calculus impacted in the ureter three inches below the renal pelvis. Renal pelvis was dilated. Renal substance was normal. Westminster Hospital Museum.

Position of impaction as found in post-mortem examinations.—In the 49 volumes of the Transactions of the Pathological Society of London there are 12 cases recorded of impacted ureteral calculus; in five one or more calculi were lodged at the lower end of one ureter and one or more calculi were found also in the opposite kidney. Anuria occurred in each of these cases. In three a calculus was impacted at the upper end; in one of these cases the kidney of the involved ureter was misplaced and malformed.[1] In two cases both ureters were obstructed by calculi near the vesical orifice; and in another a calculus was impacted in the left ureter one inch from the bladder. In each of these three cases death was caused by uræmia. In the twelfth case the lower opening of the right ureter was entirely obliterated and three calculi were lodged in separate compartments of the ureter, formed one above the other by constricting bands on its inner wall; the largest stone was situated in the upper third of the ureter and was about three inches long and three-quarters of an inch in diameter. In some post-mortem cases the ureter has been found filled, or nearly filled, from end to end with calculi. Wilmot[2] gives a case of suppurating solitary kidney with a calculus blocking the ureter.

Position of impacted calculi found at operations.—I have tabulated 46 cases in which an operation was completed on account of a calculus impacted in the ureter. The seat of impaction is stated in 44 of them. In 19 it was within two inches of the kidney, in 15 just before or where passing through the vesical wall, and in 11 somewhere about the level of the brim of the true pelvis; in three of the 11 cases the situation of the stone was below the brim, in two on the brim, and in five just above the brim; in the remaining case the description given is "a stone was found half-way down the ureter." In one case the position of impaction is not stated. In one of my own cases in which a stone was at the upper end a second calculus was impacted four inches lower down.

It is a noticeable fact that 12 out of 15 cases where the impaction was at the lower end of the ureter occurred in women, and no case has been noted of uretero-lithotomy in the male for stone impacted in this situation. I have not been able to ascertain the sex of Ceci's patient. In Rawdon's case a stone was felt by the rectum in the lower part of the left ureter of a boy close to the bladder orifice, and though not removed by operation was verified by post-mortem examination. In two cases in the subjoined table, in which a stone impacted near the bladder led to nephrectomy, the patients were males, one 37 and the other 38 years of age. Spencer Wells reports a case of urinary calculus of the size of a bean which had formed an abscess about the prostate and passed into the rectum direct from the ureter. Agnew relates a case, presumably of a boy, whom he cut for stone in the bladder; the left ureter was enormously dilated and packed with calculi of considerable size, two of which at an interval of three months escaped into the bladder and were removed by vesical lithotomy. Mr. F. W. Gordon of Auckland (New Zealand) sent me notes of a case of sudden death in a man after the introduction of a catheter into the bladder. One kidney was enlarged, the other was a small sac, weighing only three drachms, and its ureter was obliterated at the vesical extremity, presumably due to the lodgment of a renal calculus which ultimately had been passed per urethram.

CHARACTERS OF URETERAL CALCULI.

As we should expect, remembering their origin in the kidney, ureteral calculi differ in size, form, and composition. Some are composed of uric acid and others of the urates; others, again, of calcium oxalate or phosphates. They vary much in volume and number. Fig. 4 shows both ureters from the same individual packed with smooth calculi.

FIG. 4.

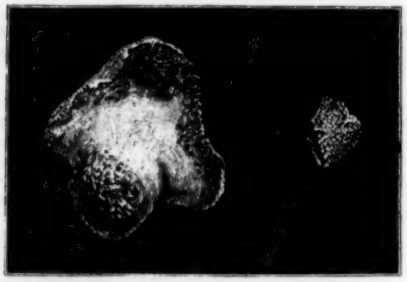
Ureters packed with calculi. Middlesex Hospital Museum.

Roberts ("Urinary and Renal Diseases") relates a case in which a single stone like a hemp-seed, weighing one and a third grains, and another in which a round uric acid stone of the size of a small pea and weighing one and a half grains killed their victims. Usually their size does not exceed that of a cherry-stone, a horse-bean, or a date-stone. They are often ovoid and elongated but sometimes more nearly spherical. Those which are prolonged into the ureter from the renal pelvis are sometimes hammer-shaped. If other calculi have been or are in the renal pelvis the one blocking the ureter may be angular or faceted (Fig. 5). They may be faceted if two or more are lodged in contact with one another in the

[1] Transactions of the Pathological Society of London, vol. xiii., p. 47.
[2] Brit. Med. Jour., Nov. 24th, 1883.

ureter itself (Fig. 6). If they remain long in the ureter they may increase by superposition of fresh salts from the urine both at their extremities and upon their surface. In some instances instead of a definite calculus there has been found a soft mortar-like calculous mass. Their surface is smooth and even polished if of uric acid or the urates, rough and often sparkling with clear beautiful crystals if of phosphate of lime, and minutely but roughly tuberculated or covered with sharp amber-coloured or brownish or yellowish-black points if of calcium oxalate. I have operated on a case where a small rough calculus of calcium oxalate was actually fixed by its processes in the walls of the ureter and required to be dug out before it could be removed. Some

FIG. 5.



Calculi removed from Case No. 40 in the table, the larger from the renal pelvis, the smaller from the ureter four inches below the renal pelvis.

rough-surfaced phosphatic calculi may be as firmly fixed. The other varieties of stone, though they may be tightly compressed by them, are not adherent to the ureteral walls. Urine may travel past the calculus and make a gutter-like depression on its surface when the ureter does not tightly invest it. Some calculi move like a ball-valve from the renal pelvis into the ureter and back again. Others when they have reached the lower end may project through the ureteral orifice into the bladder.

DIAGNOSIS.

Unless a calculus in the ureter can be felt through the abdominal parietes, the rectum, the vagina, or the bladder, its precise location cannot be ascertained except by an exploratory operation.

In most of the cases in which the stone has been impacted near the renal end of the ureter it has been discovered by a digital examination of the ureter at the time of exploring the kidney and generally when no stone has been present in the kidney itself. In one of my cases a stone was

FIG. 6.

Two facetted calculi which were impacted in the ureter against one another. Westminster Hospital Museum.

ascertained to be lodged in the ureter about one and a half inches above the brim of the bony pelvis by probing the ureter immediately after a large stone had been extracted from the kidney (No. 40 in the subjoined list). It was removed by prolonging the lumbar incision downwards and forwards towards the groin and exposing the ureter at the site at which the ureteral bougie met with a complete obstruction. This case affords a striking illustration of the value and importance of sounding the ureter throughout its extent before concluding an operation even when one or more calculi have been found and removed from the kidney.

The intra-peritoneal exploration has revealed the presence of a calculus in the ureter in a few cases and has been adopted for very different reasons in each case. Thus in Cullingworth's case the calculi were felt per vaginam and mistaken for diseased ovaries; in Lane's case the kidney had been explored from the loin some months before without result so far as finding a stone or relieving the symptoms; and in Hall's case, though the symptoms pointed to the kidney as much as to the ureter as being the seat of the calculus, an exploratory laparotomy was performed as a preliminary diagnostic precaution. Hall's order of procedure is not to be recommended. In a word, when the symptoms clearly indicate the *side* to attack and there is no indication by rectal examination in the male or vaginal examination in the female that the stone is impacted in the lower end of the ureter, or by palpating the abdomen that it is on the brim of the bony pelvis, renal exploration and sounding the ureter through the loin is the proper course to follow. The ureter can be afterwards exposed lower down, if need be, by prolonging the incision in the lumbo-ilio-inguinal line.

From calculus in the kidney.—When it is remembered how uncertain and inconstant the symptoms of stone in the kidney may be, and in how many cases they are not referred to the kidney at all but to some point along the course of the ureter or to the bladder, the ovary, the testicle, or to some other organ, a correct diagnosis of stone in the ureter is not to be frequently expected. Moreover, in many cases of ureteral calculus there are other calculi present in the renal pelvis or calyces. The symptoms produced by a calculus impacted in the ureter simulate those of a stone in the kidney itself, so that in nine out of 11 cases of uretero-lithotomy an operation was undertaken under the conviction of finding a stone in the kidney; and the converse is equally true, that the symptoms caused by renal calculus simulate those of impacted ureteral calculus. The seat of pain and the point of greatest tenderness on pressure in some cases of stone in the kidney are in the course of the ureter and not just below the eleventh or twelfth rib in front, or at the outer edge of the erector spinæ mass behind, as classically they should be. Lumbar exploration alone can clear up the diagnosis.

When the stone is situated high up in the ureter near the renal pelvis it is impossible by clinical symptoms to decide whether it is in the kidney or ureter until it has been detected by palpation through the lumbar wound; but this is of no moment because it is impossible without exposing the lower part of the kidney to remove a calculus from this part of the duct by the extra-peritoneal method. The intra-peritoneal operation in such cases is to be absolutely condemned.

When the stone is impacted lower down its exact position can be ascertained by the ureteral bougie passed through an opening in the renal pelvis, and if one be found within the lower abdominal or upper pelvic part of the ureter in the female or in any part of its lower course in the male the calculus can be removed by the extra-peritoneal method after prolonging the lumbar incision forwards and downwards.

When in the female the stone is impacted below where the ureter leaves the pelvic wall, but still at a distance of from three or two and a half inches from the bladder, its position can be diagnosed by ureteral sounding from the lumbar wound, though the best way to extract it is by the sacral route. Ureteral catheterism upwards from the bladder has been recommended, but though this may detect an obstruction and localise its situation it cannot differentiate stone from stricture of the ureter.

From encysted vesical calculus.—In an article on calculus impacted in the ureter published in 1884[3] I stated: "It is quite an ancient question in diagnosis whether some of the cases of encysted vesical calculus are not really instances of renal calculus impacted in the lower end of the ureter." It was a subject of discussion in the time of Abraham Vater and Littré (1702); and Morgagni, Collet, Le Dran, Desault, Deschamps, and Chas. Monod have since taken part in it.

Calculi which have reached the vesical end of the ureter failing to enter the cavity of the bladder may become propelled through the side of the ureter and between the coats of the bladder towards the cervix of the bladder; and thus, endeavouring to make a new passage for themselves, may form a sac beneath the mucous membrane of the bladder. Such a sac may present at a spot some little distance from the mouth of the ureter and may or may not ultimately ulcerate or rupture into the bladder cavity. This sac might either have a channel opening into the lowest part of the ureter (as seen by Littré) or the passage from the ureter to

[3] American Journal of the Medical Sciences, October, 1884, p. 464, et seq.

the sac might become shut off by adhesions; in either case it will be completely closed towards the bladder unless the mucous membrane has ulcerated or ruptured over the calculus. It is, of course, possible that such a shut sac, like a prolapsed ureter, might form a pendulous vesical tumour. The diagnosis between a stone impacted in the lower end of the ureter, on the one hand, and on the other a stone encysted in a sac formed in the manner just described, or a stone encysted in an ordinary sacculus of the bladder, might in some instances be made by observing the position of the swelling. A stone impacted in the ureter just above the ureteral orifice may be partly projecting at the ureteral orifice, but if not will have the direction and situation of the intervesical section of the ureter. A stone contained within a sac formed by the bulging or rupture of the ureteral wall and the separation of the coats of the bladder will have a situation between the mouth of the ureter and the urethral opening of the bladder. A stone encysted in an ordinary vesical sacculus may be situated at any part of the bladder—the lower, the middle, or the upper part. The ureteral orifice with the stone impacted behind it might become obliterated just as the orifice of a common sacculus of the bladder in which a calculus is lodged may be.

If the ureteral orifice became closed it might be impossible to distinguish on palpating or inspecting the bladder a calculus impacted in the ureter from one enclosed within a sac formed by a pouch of the ureter and propelled between the coats of the bladder. In neither case would an aperture of any kind be seen or felt, and if the sac were laid open there would be found in both cases an epithelial lining on the inner or ureteral, as well as on the outer or vesical, surface; in either case the outstretched ureteral wall might be so compressed against the lining membrane of the bladder as to make them appear like a single structure. If the ureteral wall had ulcerated before the calculus was propelled beneath the bladder mucous coat the inner wall of the sac would be deficient in an epithelial lining.

No differential diagnosis between the two classes of cases can be made clinically. The presence of nephrectasis[4] is not characteristic of the one as distinct from the other. If obstruction by an impacted ureteral calculus has been complete from the first the kidney atrophies; if, on the other hand, the obstruction is partial and continuous the kidney may be very little altered; whereas if the obstruction is incomplete with occasional intermissions of complete obstruction renal dilatation with atrophy of the parenchyma is produced. A considerable degree of nephrectasis may exist without giving rise to a swelling which can be detected at the bedside.

It is the same with a calculus in a closed pouch of the ureter and with a calculus in an ordinary vesical sacculus if near the ureteral orifice. Either may cause complete or only partial obstruction throughout, or incomplete obstruction with intermissions of complete obstruction. Suppurative pyelitis is much more likely to occur in "ureteral sac" cases, because urine getting from the ureter into the sac would lead to decomposition and this to ascending ureteritis extending to the kidney. The occasional intermittent discharge of large quantities of pus with the urine has been caused in this way.

From cystitis.—In so many cases of renal and ureteral calculus the leading symptoms, and very frequently the only symptoms, have reference to the bladder; consequently the patients are often treated for cystitis. This deplorable error would not so often be made if more attention were given to the examination of the urine and especially to its effect upon litmus paper. With calculus in the kidney or ureter the urine is more or less acid; even when it contains a large quantity of blood or pus it is, as a rule, still slightly acid. The pyuria of pyelitis or pyelonephritis produces a uniform turbidity, and the turbidity continues even after the urine has had time to deposit, showing that much pus remains diffused throughout its volume; moreover, there is an absence of any marked quantity of mucus. With cystitis the degree of pyuria also varies extremely, but the pus is most abundant at the beginning and ending of micturition, indicating that its source is the mucous membrane of the bladder. The urine is akaline, deposits a large quantity of stringy mucus, is offensive, and has often a strong ammoniacal odour when, or soon after, it is voided.

[4] I have suggested and have used this term to embrace every form of distension of the renal cavity, whether with urine, pus, or blood. It therefore embraces hydronephrosis, pyonephrosis, and hæmatonephrosis.

A calculus impacted at the vesical orifice of the ureter, especially if it projects into the bladder, may give rise to cystitis; but in this case sounding the bladder, digital examination by the rectum or the vagina of the lower end of the ureter, and bimanual examination of the empty bladder under an anæsthetic will enable the surgeon to make out the presence and situation of the impacted stone. In several of the cases in my list the calculus has been felt by vaginal examination.

From ureteritis.—When the irritation caused by calculus in the ureter is chronic, inflammation of the ureteral walls is likely to supervene. There is nothing which distinguishes calculous ureteritis from other forms of inflammation of the ureter except the tuberculous. The mode of onset, the history of renal colic, and possibly the former passing of calculi indicate stone but are not absolutely characteristic. A ureter involved in its whole length either by tuberculous or simple inflammation usually has its tenderest point to pressure at the brim of the bony pelvis, and if there is here a considerable induration of the peri-ureteral tissue as there often is in chronic ureteritis from any cause, it may form a nodule or lump which is very liable to be mistaken for a calculus. In tuberculous ureteritis tubercle bacilli may be found in the urine.

From the early stage of vesical tuberculosis.—The urine in vesical tuberculosis before the disease has reached the stage of tuberculous cystitis is clear and pale except when tinged with blood. With increased frequency of micturition there is often increase in the quantity of urine which may amount to three or four pints in 24 hours. Tubercle bacilli will most likely be discovered in this clear urine by the microscope and by cultivation experiments. When cystitis supervenes the urine will contain pus and mucus. The pus may be flocculent and slight in amount and be contained chiefly in the urine first passed, not uniformly diffused throughout the whole quantity of urine, as it is when derived from the ureter and renal pelvis. The tubercle bacilli are not often found in purulent urine. The hæmaturia of tuberculosis is at first so slight as to escape notice or it makes the urine faintly pink or rose-tinted throughout, though there may be a few drops of pure blood at the end of micturition. It is spontaneous, coming and going without obvious cause. Hæmaturia and pain are sometimes increased by movement and standing but are not relieved by rest and the horizontal posture, as the hæmaturia and pain caused by calculus generally are; indeed, in tuberculosis the symptoms are often aggravated at night and by the recumbent position.

From prolapsed and adherent ovary.—There are at least two instances on record where a calculus impacted in the lower end of the ureter has been mistaken and operated upon for a prolapsed, tender, and adherent ovary. It may be well, therefore, to point out some of the characteristics by which the two conditions may usually be distinguished, and I am indebted to Dr. Cullingworth for his assistance in doing so. A calculus lodged in the terminal portion of the ureter would be felt through the lateral fornix of the vagina or through the antero-lateral vaginal wall below the level of the cervix uteri, as a hard, oblong body, lying sufficiently loosely in the cellular tissue to have a fair amount of mobility and with its long axis corresponding with the direction of the ureter. A prolapsed and adherent ovary, on the other hand, would be situated within the peritoneal cavity, either in Douglas's pouch (where the question of its being a calculus in the ureter could not arise) or lying on the floor of the fossa behind one of the broad ligaments. In the latter case it would have a greater thickness of tissue between it and the examining finger than would a calculus in the ureter. Moreover, an ovary would never be found on the outer side of the antero-lateral wall of the vagina or anywhere below or in front of the cervix uteri. Other differential characters would be found in the greater hardness and distinct mobility of the calculus, in the direction of its long axis, and in the fact of there almost invariably being, in the case of a prolapsed and adherent ovary, other evidences of old pelvic peritonitis. The condition perhaps most in danger of imposing upon the unwary is where an adherent and prolapsed ovary is lying on a hard and thickened pelvic floor after an attack of severe pelvic peritonitis. The fixed and diffuse character of the hardness as contrasted with the well-defined, intensely hard, and strictly localised swelling caused by the presence of a calculus serves, however, clearly to distinguish it. If by any chance a calculus became impacted a little higher in the ureter—that is, before it is crossed by the uterine artery—it would, especially if on the left side, be easily felt through

TABLE OF 47 CASES OF OPERATION FOR URETERAL CALCULUS CLASSIFIED ACCORDING TO THE NATURE OF THE OPERATION PERFORMED.

	No.	Surgeon.	Sex.	Age.	Symptoms.	Diagnosis.	How recognised.	Operation.	Result.	Remarks.
A	1	Lucas: Transactions of the Royal Medical and Chirurgical Society, 1891, p. 129.	F.	35	Anuria for five days, following three months after a nephrectomy.	Obstruction of the ureter of the remaining kidney.	Exploration of the kidney.	Pyelotomy; stone found in the pelvis of the kidney blocking the upper end of the ureter extracted by an incision through the pelvis.	R.	The operation was performed in 1885. The patient was known to be well five years after the operation.
	2	Israel: Berliner Klinische Wochenschrift, 1886, p. 870.	F.	50	Anuria for six days.	Calculous anuria.	Exploration of the kidney.	Pyelotomy; pelvis incised and two stones removed from the upper end of the ureter; recovery with fistula.	R.	—
	3	Bergmann: Berliner Klinische Wochenschrift, 1887, p. 777.	M.	54	Complete anuria.	Calculous anuria.	Exploration of the kidney.	Pyelotomy; pelvis incised and the stone extracted from the upper end of the ureter.	R.	—
	4	Israel: Deutsche Medicinische Wochenschrift, 1888, p. 4.	M.	49	Renal colic terminating in anuria for five days.	Calculous anuria.	Exploration of the kidney.	Pyelotomy; two calculi extracted through incision in the pelvis, one impacted at the upper end of the ureter and another 10 centimetres lower down.	D.	—
B	5	Tuffier: Appareil Urinaire. Duplay and Reclus' Traité de Chirurgie.	—	—	Attacks of renal colic for nine years. Enlargement of the right kidney.	Renal calculus.	Lumbar exploration.	Nephrotomy; stone in the ureter where the latter crosses the pelvic brim. It was pushed up into the renal pelvis and removed through the incision in the kidney.	R.	—
	6	Lange: Medical News, Jan. 16th, 1886.	M.	30	Anuria two months after nephro-lithotomy had been performed on the left kidney.	Calculous anuria.	Exploration of the right kidney by lumbar incision.	Nephrotomy; impacted concretions removed from the upper part of the ureter through incision in the kidney substance close to the pelvis.	R.	—
	7	H. Morris: Origin and Progress of Renal Surgery, p. 278, 1888.	F.	35	Incomplete anuria, with intermission for 18 days, followed by complete anuria for four days.	Calculous anuria.	Exploration (lumbar incision) of left kidney.	Nephrotomy; stone extracted from kidney substance and another from the upper end of the ureter. Kidney completely disorganised, but patient too ill for nephrotomy.	Died two hours after operation.	This was the third operation. The other two had been performed on the right kidney which had been much diseased by the presence o stones.
	8	Torrey: American Journal of the Medical Sciences, 1889.	F.	47	Symptoms of uræmia occurring in a case of pyonephrosis of the left kidney.	Uræmia; pyonephrosis.	Lumbar exploration of the kidney.	Lumbar nephro-uretero-lithotomy. Two ureters were present and in the lower a calculus was found one inch below the pelvis. Attempts to dilate the ureter caused it to rupture and the stone was then easily extracted. No harm or hæmorrhage followed.	R.	—
	9	Hall: Medical Record (New York), Oct. 12th, 1890, p. 430.	F.	36	Recurrent renal colic.	Stone in the kidney or ureter.	Exploratory laparotomy; the stone was felt in the ureter three inches below the kidney.	Lumbar nephrotomy; the stone was extracted by invagination of the sac consisting of dilated pelvis and upper end of the ureter.	R.	—
	10	Pousson-Demons: Annales des Maladies des Organes Génito-urinaires, 1894, p. 99.	M.	43	Anuria for nine days.	Calculous anuria.	Lumbar exploration.	Nephrotomy; some gravel was crushed and removed from the upper end of the ureter followed by discharge of urine by the urethra and wound.	Death in 24 hours from continuation of symptoms.	—
	11	Lequeu: Annales de Guyon, 1895.	M.	47	Anuria for six days.	Calculous anuria.	Lumbar exploration.	Lumbar nephrotomy; stone found impacted at the upper end of the ureter.	R.	—

A, Pyelotomy. B, Nephrotomy.

TABLE OF 47 CASES OF OPERATION FOR URETERAL CALCULUS CLASSIFIED ACCORDING TO THE NATURE OF THE OPERATION PERFORMED—(*Continued*).

	No.	Surgeon.	Sex.	Age.	Symptoms.	Diagnosis.	How recognised.	Operation.	Result.	Remarks.
B	12	Lequeu: Annales de Guyon, 1895.	M.	54	Anuria for six days.	Calculous anuria.	Left lumbar exploration.	Nephrotomy; stone was taken out of the upper end of the ureter through incision in the kidney.	D.	—
	13	Israel: Presse Médicale, April 8th, 1896.	F.	45	Attacks of renal colic for eight years on both sides, terminating in an attack of anuria for six days.	Calculous anuria.	Exploration of the kidney.	Nephrotomy; stone was found in the ureter two centimetres below the innominate line. In pushing the stone up the pelvis tore away from the kidney. This was sutured and a tampon was put in.	R.	The wound finally healed completely.
C	14	Cotterell: Transactions of the Royal Medical and Chirurgical Society, London, vol. lxxvii.	F.	44	Pain after micturition.	Stone in the bladder.	Digital exploration of the bladder revealed two calculi in the right ureter.	Vaginal ureterotomy; stones removed by incision through the roof of the vagina.	R.	—
	15	Doyen Glantenay: Chirurgie de l'Uretère, p. 126.	F.	21	Vesical pain; frequency of micturition.	Calculus.	Stone in the lower end of the ureter detected by a vaginal examination.	Vaginal ureterotomy; ureteral wound closed by sutures.	R.	—
	16	Cabot: Boston Medical and Surgical Journal, Dec. 25th, 1890.	F.	39	Attacks of renal colic for 16 years; often followed by passage of stones. Left pyonephrosis felt as a tumour.	Calculus.	Vaginal examination revealed a small hard mass in the left broad ligament close to the cervix uteri.	Vaginal ureterotomy; stone removed through the vagina; 10 or 12 ounces of pus were evacuated; tumour of the kidney disappeared.	R.	Uretero-vaginal fistula remained for four months. The secreting tissue of the kidney was thought to be destroyed.
	17	Th. Addis Emmett: Principles and Practice of Gynæcology, 1879.	F.	—	—	Calculus.	Stone in the lower end of the ureter detected by the "click" of a sound in the bladder. On backward pressure with a larger sound the stone could be felt through the vagina and rectum.	Vaginal ureterotomy; stone removed by an opening through the vaginal wall, which was closed with interrupted sutures.	R.	—
D	18	Ceci, quoted by Vailhen: Riforma Medica, 1887.	—	—	Anuria.	Calculus.	Per rectum.	Ureterotomy through the rectum; calculus extracted from the ureter by an incision through the rectum.	R.	—
E	19	Thornton: Harveian Lectures, 1889.	F.	—	—	—	—	Vesico-ureterotomy; stone removed from the lower end of the ureter through the bladder. A ureteral fistula resulted and urine was discharged into the pouch of Douglas.	D.	—
	20	Th. Addis Emmett: Principles and Practice of Gynæcology, 1879.	F.	—	—	—	—	Vesico-ureterotomy; removal of calculus through the bladder by means of curette forceps, after opening the bladder.	—	—
F	21	Briddon: New York Medical Journal, 1890, p. 582.	M.	15	Paroxysms of abdominal pain referred especially to the left side; headache, nausea, and vomiting; albuminuria and pyuria; development of an area of dulness and induration in the left inguinal region.	—	Incision in the left groin and evacuation of ten ounces of pus; wound found to lead up to the left kidney; this wound was again explored a week later and it was then decided to explore the kidney.	Lumbar nephrectomy, Oct. 5th; the kidney substance contained multiple abscesses.	Death, Nov. 23rd.	At the post-mortem examination the right ureter was found to be double and one portion contained a calculus, which extended down into it from the pelvis of the kidney. There were numerous abscesses in the right lung, also a large amount of pus over the anterior half of the left hemisphere of the brain.

B, Nephrotomy. C, Vaginal-ureterotomy. D, Recto-ureterotomy. E, Vesico-ureterotomy. F, Nephrectomy.

TABLE OF 47 CASES OF OPERATION FOR URETERAL CALCULUS CLASSIFIED ACCORDING TO THE NATURE OF THE OPERATION PERFORMED—(*Continued*).

No.	Surgeon.	Sex.	Age.	Symptoms.	Diagnosis.	How recognised.	Operation.	Result.	Remarks.
F 12	H. Morris (1890): Hunterian Lectures, 1898, p. 184.	M.	38	Pain for six years; previous passage of calculi: frequent micturition; pyuria; pain in both loins, chiefly in the left.	Renal calculus.	Post-mortem examination.	Nephrectomy; left kidney weighed a little over two ounces; in state of chronic nephritis; cysts and calculous débris in the left kidney; urine freely passed after operation.	Sudden death on the second day after operation.	Calculus in the left ureter two inches from the lower end. The right kidney was small and in a state of chronic interstitial inflammation.
13	Richardson: Boston Medical and Surgical Journal, April 13th, 1893, p. 359.	F.	33	Symptoms of dyspepsia with occasional vomiting; the pain afterwards became referred to the left lumbar region and a large fluctuating tumour developed.	Hydronephrosis.	Presence of hydronephrosis on the left side.	Abdominal nephrectomy; double ureter; one ureter blocked by calculus, with hydronephrosis of the corresponding part of the kidney, while the rest of kidney—i.e., about a quarter of it—was normal with patent ureter.	R.	—
24	Jordan Lloyd: Brit. Med. Jour., Oct. 24th, 1896, p. 1268.	M.	37	Subject to paroxysmal pain in the left loin for 22 years and had often had hæmaturia. The urine contained a trace of blood, but no crystals. Pyuria. During the period of pain less urine was passed, with scarcely a trace of pus.	Symptoms simulated renal calculus.	Post-mortem examination.	Lumbar nephrectomy. The kidney was small, shrivelled, and tough. Obviously it was useless and it was therefore removed.	Death 64 hours after operation.	At the post-mortem examination the ureter was found to be dilated throughout to the thickness of an adult thumb and contained fœtid urinous fluid. Close to its entrance into the bladder a calculus of the size of a large horse-bean was found. Opposite kidney and ureter were normal.
G 25	Bardenheuer, quoted by Thelen: Centralblatt für Chirurgie, March 25th, 1882.	F.	27	Complete anuria for two days.	Calculous anuria.	Lumbar exploration of the right kidney.	Uretero-lithotomy (extra-peritoneal). Calculus extracted from the upper end of the ureter. The incised ureter was fixed to the wound, thus making a permanent fistula.	R.	The left kidney was destroyed by suppuration consequent upon cystitis.
26	Ralfe and Godlee: Brit. Med. Jour., 1889, p. 474.	F.	26	Attacks of renal colic on the left side; anuria for 53 hours.	Calculous anuria.	Lumbar exploration.	Uretero-lithotomy (extra-peritoneal); stone blocking the ureter two inches below the kidney; longitudinal uretero-lithotomy.	R.	—
27	Kirkham: THE LANCET, March 16th, 1889, p. 525.	M.	58	Attacks of left renal colic followed by anuria for five days; previously there had been renal colic on the right side.	Destruction of right kidney by previous attacks; anuria caused by disease of left kidney.	Left lumbar incision.	Calculus felt half an inch above where ureter crosses the external iliac artery; retro-peritoneal uretero-lithotomy by extension of the lumbar incision; removal of stone; no sutures.	R.	—
28	Twynam: Transactions of the Clinical Society of London, vol. xxiii., 1890.	M.	8	Renal pain on the left side; hæmaturia.	—	Exploratory laparotomy showed stone in the right ureter just below brim of the pelvis.	Uretero-lithotomy (extra-peritoneal) in right iliac region three weeks after the exploratory laparotomy. Stone was removed; wound in ureter sutured; drain-tube inserted into retro-peritoneal space.	R.	
29	Cabot: American Journal of the Medical Sciences, January, 1892, p. 43.	M.	40	Sharp attacks of pain referred to the left side of the abdomen above the middle of Poupart's ligament. During three months before operation there was a sensitive spot in the back midway between the crest of the ilium and the twelfth rib.	Stone in the ureter diagnosed.	Lumbar incision.	Uretero-lithotomy (extra-peritoneal). Removal of calculus from the ureter two inches below the kidney. The wound in the ureter was not sutured.	R.	—

F, Nephrectomy. G, Uretero-lithotomy (extra-peritoneal).

TABLE OF 47 CASES OF OPERATION FOR URETERAL CALCULUS CLASSIFIED ACCORDING TO THE NATURE OF THE OPERATION PERFORMED—(*Continued*).

No.	Surgeon.	Sex.	Age.	Symptoms.	Diagnosis.	How recognised.	Operation.	Result.	Remarks.
G 30	Fenger: Chicago Medical Record, March, 1893.	M.	35	Increasing attacks of renal colic for two years; no hæmaturia; no tumour.	Nephro-lithiasis.	Lumbar incision; palpation revealed two stones in the ureter one and a half inches below the kidney.	Uretero-lithotomy (extra-peritoneal). Longitudinal incision in the ureter and removal of stones. No sutures were used.	R.	—
31	Hind: Brit. Med. Jour., vol. i., 1894, p. 960.	M.	55	Suppression of urine for 6 days.	Renal calculus.	Exploration of the right kidney.	Uretero-lithotomy and nephro-lithotomy (extra-peritoneal). Calculus was found blocking the upper end of the ureter; several small stones in pelvis were also extracted through the same incision in the ureter. A large stone (36 grains) was also removed from the kidney substance.	Death 58 hours after operation.	After the operation urine was freely passed till death. The left kidney proved to be a mere shell, due to previous similar disease.
32	Unpublished. Quoted by H. Morris: Origin and Progress of Renal Surgery, p. 77.	M.	32	After pain in the right loin for two months had an attack of right renal colic. Subsequently pain in the right loin, always brought on by exertion. A second violent attack of colic with pain in the line of the ureter where it crosses the pelvic brim; and a hard body like a stone could be felt there through the abdominal wall.	Stone in ureter.	Felt through the abdominal wall at the pelvic brim.	Exploratory cœliotomy in the median line and through this incision the small rough stone in the ureter was ascertained to be present. Retro-peritoneal ureterotomy was performed through a slightly oblique wound in the ilio-costal space. The calculus was steadied by the hand of an assistant passed through the abdominal incision.	R.	The walls of the ureter did not heal satisfactorily and extravasation of urine took place.
33	Jordan Lloyd: Brit. Med. Jour., Oct. 24th, 1896, p. 1207.	F.	35	Attacks of left renal colic of two years' duration occurring every four or five weeks. Slight hæmaturia and some oxalate crystals in the urine.	Symptoms pointed to renal calculus.	Exploration of the left kidney with negative result. Stone was found by an intra-peritoneal incision, parallel to and one inch above the outer third of Poupart's ligament, to be situated in the ureter one inch above its entrance into the bladder.	Extra-peritoneal uretero-lithotomy; the stone was removed by prolongation of the outer end of the iliac incision upwards and outwards as though for tying the common iliac artery, the uncut part of the peritoneum being stripped off from the iliac fossa.	R.	The ureter was not sutured, there was no escape of urine, and a perfect recovery took place.
34	Israel: Presse Médicale, April 8th, 1896.	M.	—	Anuria for six days.	Calculous anuria.	Exploration of the kidney.	Nephrotomy; uretero-lithotomy (extra-peritoneal); stones were found in the kidney and one two centimetres below the commencement of the ureter. Removed through an incision in the ureter.	R.	In this case the kidney operated upon was the only one the patient possessed.
35	H. B. Robinson: Brit. Med. Jour., vol. ii., 1897, p. 648.	F.	23	Attacks of renal colic since the age of 15 years; occasional hæmaturia; right hydronephrosis.	Thought probable that there was an obstruction of the ureter.	Urethra dilated and ureters catheterised. An obstruction was found in the right one a quarter of an inch from its termination. Bimanual examination showed this obstruction to be a body the shape of a date stone, but larger, and it was in relation with the posterior part of the cervix uteri.	Uretero-lithotomy (extra-peritoneal); incision three and a half inches long commencing on a level with, and about one inch internal to, the anterior superior spine and directed upwards and a little inwards. The peritoneum was stripped off and the ureter exposed. The stone was removed through an incision one inch in length which was sutured with fine interrupted silk sutures.	R.	—

G, Uretero-lithotomy (extra-peritoneal).

TABLE OF 47 CASES OF OPERATION FOR URETERAL CALCULUS CLASSIFIED ACCORDING TO THE NATURE OF THE OPERATION PERFORMED—(*Continued*).

No.	Surgeon.	Sex.	Age.	Symptoms.	Diagnosis.	How recognised.	Operation.	Result.	Remarks.
C 36	H. B. Robinson: Transactions of the Clinical Society of London, 1898.	F.	16	Attacks of renal colic for 10 years which gradually became more frequent. Hydronephrosis on the left side.	Calculus in the ureter.	Vaginal examination detected a hard body in the left ureter which was thought to be a calculus.	Uretero-lithotomy (extra-peritoneal); curved incision above the internal abdominal ring; peritoneum stripped off vessels. Incision of one inch into the ureter and oxalate of limestone (25 grains) extracted.	R.	—
37	H. Morris: June 12th, 1899.	F.	33	After voyage patient was taken with pain below the last rib on the right side both in the loin and towards the front of the abdomen, attended by hæmaturia. Discomfort in the right renal region with attacks of pain and hæmaturia at increasingly frequent intervals till June, 1899. Pain and hæmorrhage were increased by the slightest exercise.	Calculus in kidney or upper end of ureter.	Lumbar incision; kidney deeply congested.	Uretero-lithotomy (extra-peritoneal); kidney incised through the convex border; the lower calyces were pouched; no stone. The renal pelvis was somewhat distended; no stone. Two inches below the hilum the ureter was completely blocked by a rough calcium oxalate stone, the inequalities of which were sticking into the walls of the ureter. Calculus removed through longitudinal incision in the ureter; one suture.	R.	[illegible]
38	Thornton: Harveian Oration.	F.	—	—	—	During an abdominal operation for nephrectomy a stone was found half way down the ureter of the opposite side.	Uretero-lithotomy (extra-peritoneal); stone was removed from the ureter by a lumbar incision.	D.	Death on the sixth day from bronchopneumonia.
39	Cotterell: Transactions of the Royal Medical and Chirurgical Society, vol. lxxvii.	F.	61	Symptoms of stone in the pelvis of the right kidney; persistence of pain and tenderness after two operations on the kidney, in the first of which stones had been removed.	—	—	Uretero-lithotomy (extra-peritoneal); incision as for tying the common iliac artery. The stone was found just above the true brim of the pelvis and extracted through a small longitudinal incision.	R.	—
40	H. Morris: Origin and Progress of Renal Surgery, 1898. Table II., No. 44.	M.	31	For seven years at intervals pain and hæmaturia. A small stone was passed in 1891 and another in 1897.	Renal calculus.	Lumbar exploration, December, 1897.	Pyelotomy and extraction of a stone from the renal pelvis. Uretero-lithotomy and extraction of a second stone through an incision in the ureter four inches below the renal pelvis.	R.	[illegible]
41	Bruce Clarke: Transactions of the Medical Society of London, vol. xxii., p. 104.	F.	—	Symptoms for two years attributed to renal calculus.	Renal calculus.	Lumbar exploration of kidney.	Lumbar incision prolonged; ureter incised and calculus extracted from it at a point five inches below the kidney.	R.	—
42	Freyer: Transactions of the Medical Society of London, vol. xxii., p. 99.	M.	23	Renal colic with hæmaturia for 19 months.	Renal calculus with renal obstruction.	Exploration through an oblique lumbar incision. Stone felt in the ureter four inches below the kidney.	Loin incision prolonged; ureter incised longitudinally and the calculus removed *in situ*.	R.	[illegible]

R, Uretero-lithotomy (extra-peritoneal).

TABLE OF 47 CASES OF OPERATION FOR URETERAL CALCULUS CLASSIFIED ACCORDING TO THE NATURE OF THE OPERATION PERFORMED—(*Continued*).

No.	Surgeon.	Sex.	Age.	Symptoms.	Diagnosis.	How recognised.	Operation.	Result.	Remarks.
H 43	Cullingworth: Transactions of the Pathological Society of London, vol. xxxvi., p. 278.	F.	30	Renal colic on the right side.	Right pyonephrosis and independent ovarian disease.	Vaginal examination showed hard masses to the right and left of the uterus. Laparotomy showed stone in the right ureter just above the bladder.	Ureterotomy (intra-peritoneal); removal of stone; escape of pus; interrupted silk sutures closed the wound in the ureter.	D.	Post-mortem examination showed double pyonephrosis. Sutures in the ureter were secure.
44	Lane: THE LANCET, Nov. 8th, 1890, p. 967.	F.	23	Left renal colic for 20 years; hæmaturia; pyuria.	Renal calculus.	Laparotomy showed pelvis of the left kidney dilated; no stone found. Eight months later a second laparotomy revealed stone.	Ureterotomy (intra-peritoneal); stone found in the pelvic portion of the ureter and removed by ureterotomy. Wound in ureter closed with continuous silk suture.	R.	—
45	Roberts: Annals of Surgery, 1895, vol. xxii., p. 363.	F.	57	Attacks of renal colic since the age of 11 years. Stones passed on a number of occasions. Recent attacks of pain every week followed by pyuria.	Renal calculus thought probable.	Exploration of kidney by lumbar incision. No stone in the kidney or the pelvis. Ureter was greatly enlarged. A bougie passed through a small longitudinal opening was obstructed 10 inches lower down. The urethra was now dilated and the end of the bougie was felt by the finger in the bladder, and around this could be felt a mass which was thought to be a growth causing a stricture of the ureter. The bougie was withdrawn, the wound in the upper end of the ureter was sutured, and a postponement was made for a further abdominal operation.	Laparotomy; small stone was found in the ureter and removed by transperitoneal method; ureter was closed with silk sutures.	R.	—
46	Roberts: Referred to by Perkins.	F.	—	A swelling could be felt through the vagina behind and to the left of the uterus.	—	Primary lumbar incision to explore kidney; catheterisation showed an obstruction one and a half inches above the bladder.	Uretero-lithotomy (intra-peritoneal); laparotomy performed and stone removed.	—	—
47	H. Morris: American Journal of the Medical Sciences, October, 1889.	F.	55	Gradual onset of anuria for six months, which was complete six days before death.	Stone in lower end of ureter.	Calculus detected at the lower end of the ureter by means of digital exploration of the bladder.	An attempt to dislodge the stone with the finger passed through the urethra into the bladder failed and the condition of the patient did not allow of any further operation.	D.	This case has a conspicuous place in the history of uretero-lithotomy and for that reason is included in this table. Although the condition of the patient did not permit of the extraction of the calculus being completed this case induced me to suggest and publish definite plans of performing vesico-ureterotomy, and it also led up to the development of other methods of uretero-lithotomy.

H, Uretero-lithotomy (intra-peritoneal).

Besides the cases tabulated here Israel has also referred to three cases of uretero-lithotomy operated upon by himself for impacted stones, two of them by the vaginal method. He also speaks of two cases in which he has removed the ureter entirely filled with stones (*Berliner Klinische Wochenschrift*, Feb. 27th, 1899).

the rectum. Its shape, the direction of its long axis, its clearly-defined outline, its relation to the iliac vessels, and its "stony" hardness would again be the chief means of distinguishing it from a displaced and adherent ovary.

SYMPTOMS.

The symptoms are the same as those of renal calculus; and as with a stone in the kidney, so also with one in the ureter, it may be either unsuspected or quiescent, no symptom whatever may cause its presence to be known during life, and its discovery may be a surprise on post-mortem examination; or it may excite symptoms which point to some other part or organ, not to the ureter; or after causing more or less severe disturbance it may settle down and become quiescent for years.

In thin persons when the stone has been impacted just above the brim of the bony pelvis a small hard body has in rare cases been felt through the abdominal wall. If in the presence of the ordinary symptoms of stone in the kidney the position of such a lump corresponds with the seat of a constant pain and of a pricking sensation whenever pressure is made upon it the localisation of a stone in the ureter is pretty clear. So is it if, with the symptoms of stone in the kidney, or with frequent and painful micturition, a hard body is felt in the course of the ureter by vaginal or rectal palpation, or by digital examination or sounding of the bladder. On cystoscopic examination the mucous membrane around the ureteral orifice may be seen discoloured from extravasated blood when a calculus is impacted at the lower end of the ureter.

Through the roof of the vagina a calculus can be felt at any spot within the last two and a half or three inches of the ureter and could be removed therefrom without opening the peritoneum. Through the rectum not more than one and a half inches of the ureter is thus under control. In Rawdon's case the calculous mass felt through the rectum gave the impression of being fixed to the posterior wall of the bladder. The lower end of the ureter contained a cretaceous substance and two calculi; the lower calculus was of the size of a date-stone and was close behind the ureteral orifice.

The passage of a calculus along the ureter should be suspected if attacks of pain and hæmaturia and other symptoms suggestive of renal calculus have extended over several days or weeks or months, and if with each succeeding attack the pain and tenderness on pressure are located lower and lower down along the course of the ureter, and the bladder at length becomes the seat of pain and irritability. So also should suspicion be aroused if, after one or more attacks of typical renal colic, the patient is suddenly seized, after walking or some exertion, with a violent pain shooting along the course of the ureter and followed by settled pain and great tenderness at one particular spot in this course, lasting days or weeks uninterruptedly. I have related a very typical case of this kind in my Hunterian Lectures on the Origin and Progress of Renal Surgery (1898, p. 77).

The severity of the pain and hæmaturia and the subsequent effect upon the kidney depend upon the character of the stone more perhaps than upon its size. A small calculus with a rough or angular surface does the greatest harm and is less likely to pass than a smooth uric acid calculus of much larger size; it is more prone to stick into the wall of the ureter and cause œdema, inflammation, or ulceration. Fig. 7 shows the natural size of a minute calculus which I removed from the ureter of a woman two inches below its junction with the renal pelvis. It had given rise to six months of continuous discomfort, aggravated by the most severe attacks of pain and hæmaturia. Rest gave relief, but on one occasion after a period of three weeks in bed the first walk across the bedroom induced a fresh attack. The calculus was very firmly fixed by its minute rough processes and had to be actually dug out of the ureteral wall. In this case hæmaturia was a very pronounced symptom.

FIG. 7.

Calculus removed by ureterolithotomy impacted two inches below the renal pelvis (author's case).

As soon as impaction occurs in the ureter the symptoms will greatly depend upon whether or not the opposite kidney is healthy in structure and unhampered in function. If there is but one kidney or the two kidneys are fused and have only a single ureter, if the opposite kidney has been previously destroyed, whether by calculous, tuberculous, or some other disease, or if the two ureters are blocked simultaneously by calculi, anuria with all its alarming symptoms is the result.

A calculus of one and a half grains impacted in the ureter has been the cause of a fatal anuria in such conditions as those just mentioned. If the calculus is dislodged under the influence of accumulated pressure of urine, of opium or chloroform, or of the expulsive power of the ureter, the kidney may regain its secreting function and the effects of anuria may pass off. On the other hand, the poisoning effects of uræmia may be too severe to pass off with the escape of the stone, and death may result just as if the calculus had remained impacted. It is often stated that anuria is in some instances produced by a calculus, lodged in one ureter, causing a reflex suppression—i.e., producing a complete inhibitory effect upon the opposite kidney. It is doubtful, however, whether such an effect, if it ever occurs, lasts more than a few hours when the opposite kidney is structurally quite healthy.

A persistent abdominal tumour on the same side as the impaction, due to nephrectasis, is an occasional symptom of ureteral calculus.

An intermittent abdominal tumour due to hydronephrosis—i.e., a tumour preceded by a diminution in the quantity of urine passed, and the subsidence of which is accompanied and followed by a largely increased discharge of urine—has of late years become a recognised symptom of renal obstruction due to calculus, moveable kidney, ureteral valve, or ureteral stricture.

Nephrectasis is very apt to occur in those cases in which the calculus is in the upper end of the ureter and from time to time slips back again into the dilated renal pelvis. It must not be forgotten, however, that very considerable atrophy of the renal parenchyma with considerable dilatation of the renal pelvis and calyces (nephrectasis) is often present without any evidence of a tumour ascertainable by palpation of the abdomen. Another indication of hydronephrosis, whether associated with an abdominal swelling or not, is the occasional diminution in the amount of urine associated with renal pain, followed after a variable period of days or weeks by relief of the pain when a greatly increased quantity of urine is passed. Periodical discharges of pus point to pyonephrosis. The late Dr. Habershon[5] recorded a typical case of this kind. A man, aged 64 years at the time of his death, had from the age of 16 years suffered from periodical discharges of pus. Each discharge was preceded by the formation of a large right-sided abdominal swelling and was followed by the disappearance of the swelling. After death a calculus was found blocked in the right ureter and several pints of pus distended the pelvis of the right kidney the upper part of which was the seat of a cancerous new growth.

The urine may contain some or other of the following deposits—crystals, fragments of calculus, fibrous coagula, blood, blood-casts of the ureter, and pus. In some cases blood and pus have been found together in small or moderate amounts, in others there has been severe hæmaturia, and in others, generally cases of long standing, there have been large discharges of pus.

Prolapse of the ureter into the cavity of the bladder, and in the female even through the urethral orifice as far as the vulva, is one of the rarer effects of calculus impacted in the ureter.[6] Its presence should at once suggest the probability of ureteral calculus.

PROGNOSIS.

1. *As regards the kidney.*—This is very unfavourable. If the obstruction is complete and the ureter remains blocked either by the calculus itself or by a stricture caused by the cicatrisation of an ulcer or slough due to the damage wrought by the calculus while impacted, the kidney after many months becomes converted into a small fibrous mass or small sac. If the calculus after a while, even after four or five months, should be dislodged and the ureteral channel opened up again, the kidney, though damaged, may become repaired.

If the obstruction is not complete dilatation with atrophy of the renal substance is sooner or later the consequence in most instances, and if any septic condition of the urinary organs arises pyonephrosis and suppurative

[5] Transactions of the Clinical Society of London, vol. xiii., p. 141.
[6] See Transactions of the Pathological Society of London, vol. xiv., p. 185, and vol. xxx., p. 310.

pyelonephritis supervene. Cancer of the obstructed kidney has been met with associated with impacted ureteral calculus of many years' standing. (Habershon, Morris.)

2. *As regards life.*—This depends on the condition of the opposite kidney. If healthy the unobstructed kidney will become hypertrophied and will perform the additional function demanded of it in a manner consistent with excellent and prolonged life; and if the kidney involved simply atrophies all may go well with the patient if he does not subsequently form a fresh calculus in the healthy kidney, as in many instances is the case. If, on the other hand, the kidney involved undergoes active inflammatory and suppurative changes, life is jeopardised thereby, and the prognosis then depends upon the promptitude of surgical treatment and the resisting and reparative powers of the patient. If the ureteral wall has been much damaged by the prolonged pressure or laceration caused by the calculus, extravasation of urine may occur into the retro-peritoneal cellular tissue and abscess or diffused suppuration may result.[7] If the opposite kidney is defective, obstructed, or absent, complete suppression of urine is the consequence of ureteral impaction, the patient becomes comatose and dies within some days or weeks from the date of impaction. If the loss of the function of both kidneys is not quite complete the patient may survive a little longer, pass daily small quantities of urine mingled with blood and perhaps pus, become very ill with fever and diarrhœa, and die in a typhoid state at the end of several weeks. (Bence Jones.)

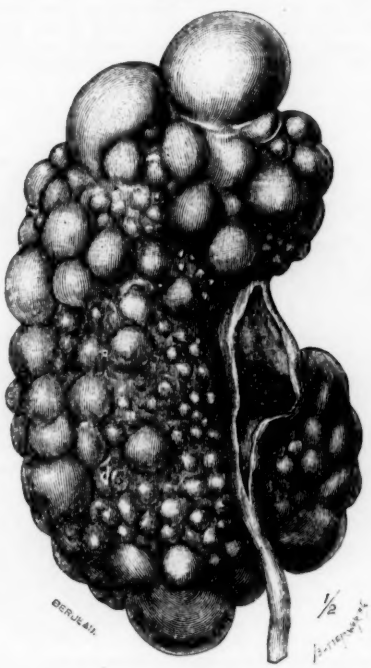
PATHOLOGICAL EFFECTS.

On the ureter.—Above the obstruction the ureter may become thinned out by eccentric pressure and stretching, or œdematous, inflamed, or ulcerated, or it may be dilated and sacculated, and more or less tortuous. The dilated ureter may rupture, bursting as the urethra bursts behind a stricture,[8] but usually the ureter becomes thickened as well as dilated from ureteritis. Stricture of the ureter may follow ulceration or a slough *at the site of impaction. Below the obstruction* the ureter may be very little if at all changed, or part or the whole length of it to the bladder may be thickened and stenosed or converted into a mere fibrous cord. The whole ureter has been met with converted into an impervious cord when a stone had blocked the upper end. The mucous membrane of the bladder around the ureteral orifice is sometimes greatly discoloured from extravasated blood when the ureter is plugged by a calculus at its lower end. A stone impacted in the lower extremity of the ureter may escape into the bladder by setting up ulceration; or after pouching or rupturing the inter-vesical ureteral wall it may cause the mucous membrane of the bladder to project in a cyst-like and more or less pendulous manner; or the lower end of the ureter, whether or not containing the calculus, may be prolapsed into the bladder with the ureteral orifice reduced to the size of a pinhole and situated on the summit of the prolapsed swelling.

The calculus is less likely to ulcerate or rupture into the cellular tissue behind the bladder because of the greater thickness of the bladder wall on the outer than on the inner aspect of the ureter. For three-quarters of an inch the ureter traverses the bladder wall, having the muscular coat on the outside and little more than the mucous membrane on the inside of it. As stated previously, Spencer Wells met with a case in which a urinary calculus was dislodged per rectum after a periprostatic abscess, and he conjectured that perhaps the calculus had never been in the bladder but had passed from the ureter backwards.[9] Cancer of the lower end of the ureter extending to the bladder has supervened on impaction of a calcium oxalate stone in the lower end of the ureter.[10]

On the kidney.—The kidney may undergo chronic changes and its calyces and pelvis may be dilated. It may be rendered anæmic, œdematous, and enfeebled and converted into a shrivelled mass of fibrous tissue; or into a polycystic condition (Fig. 8); or be entirely destroyed, shrunken, and reduced to an aggregation of pouches (Fig. 10) with no true renal tissue left; or be converted into a thin-walled sacculus containing limpid urine without pus or micro-organisms; or into a thick-walled cyst with thick, tough fibrous partitions, containing many ounces, or even a pint or two of pus and with no remains of proper secreting tissue. There is sometimes great thickening as well as dilatation of the renal pelvis and calyces; and with atrophy of the secreting structure there may be great thickening of the fibrous capsule and great increase in the interstitial tissue of the kidney, so that the organ looks to be hypertrophied as well as sacculated. The interior may be filled with pus, dense walls of tough fibrous tissue separating the calyces and sometimes shutting one or more off entirely from the rest. In fact, the kidney may be in any stage of hydro- or pyonephrosis. When occupied by a large abscess or distended by pyonephrosis a fistulous communication may form with the surface in the loin or groin (Fig. 9); or may pass through the diaphragm and establish an empyema; or may open into the colon or stomach; or may cause diffused perinephritis and retro-peritoneal suppuration. In the cases which I have met with of impacted ureteral calculus where the kidney has thus given way and caused fistula or perinephritis there have been calculi present in the kidney also. The kidney has in rare cases become the seat of carcinoma, as stated before.

FIG. 8.



Polycystic kidney with renal calculus impacted in the upper end of the ureter. Guy's Hospital Museum, No. 1607.

On the peri-ureteral tissue.—This may become the seat of inflammation and even of abscess or diffused suppuration resulting in fistula. The lumbar region, the groin, the cavity of Retzius, and the peri-prostatic regions have been the situations of abscess or fistula. Fibro-lipomatous changes are frequent.

TREATMENT.

If symptoms continue giving rise to a suspicion of an impacted ureteral calculus, or if attacks of pain, hæmaturia, and pyuria recur after complete rest and the trial of the usual medicinal treatment, the ureter ought to be explored. If a calculus is known to be blocking the ureter it ought to be removed without delay by one of the methods of extra-peritoneal ureterotomy if it cannot be extracted through the renal pelvis. There is no medicinal treatment which is of any use or which affords any hope of saving life or the integrity of the kidney when a stone is impacted in and not simply passing down the ureter. If not effected in a few hours its passage should be assisted or the stone removed by operation; there is great danger to

[7] See case recorded in my Hunterian Lectures, p. 77.
[8] Morgagni and Velpeau's Surgery, 1851, p. 1021; see Transactions of the Pathological Society of London, vol. xvi., p. 1761; see also St. Bartholomew's Museum, No. 2356.
[9] Transactions of the Pathological Society of London, vol. v., p. 202.
[10] Brit. Med. Jour., Oct. 18th, 1884, p. 758.

the kidney and even to life by delay, especially if active symptoms continue. On the other hand, extra-peritoneal uretero-lithotomy is highly successful and will probably become almost as uniformly so as nephro-lithotomy. Velpeau, before 1851, satisfied himself upon the dead body that he might have removed a calculus of the size of a nut through the flank from the abdominal part of the right ureter of a patient under his own care. Gigon of Angoulême in 1856 described every detail of the modern operation of uretero-lithotomy which he proposed to perform, but did not carry out, in a case of his own. In justice to myself, and with reference to many remarks which have been made by writers who have had only my article published in 1884 to go by, I ought to add that in 1885, without then having had the opportunity of carrying it into effect, I recommended uretero-lithotomy in any part of the course of the ureter for impacted stone. In a private letter written on Sept. 8th, 1885, to Mr. Albert Dunlop, surgeon-superintendent of the Ipswich Hospital, Queensland, in answer to a letter asking my advice as to a case in which he had explored the kidney of a girl, aged 20 years, with negative result, I wrote: "Either explore the kidney through the loin again and incise the kidney and examine its cavity with the finger and the ureter with a sound or make an examination of the kidney and ureter from within the peritoneal cavity. If a stone be found in the ureter cut it out from behind the peritoneum and apply continuous sutures to the ureter, if it cannot be pressed downwards into the bladder whence it can be removed through the urethra. Either of the above should be tried before resorting to nephrectomy."

FIG. 9.

Calculus impacted in the upper end of the ureter. The kidney is destroyed. The ureter is thickened by chronic inflammation. An abscess has made its way to the surface and left a sinus opening on the loin. St. Bartholomew's Hospital Museum.

The accompanying table contains a list of 46 completed operations performed on account of ureteral calculus. In but very few of them, however, had an accurate diagnosis been arrived at beforehand. The character of the operations differed greatly. In four cases nephrectomy was performed; in one of these cases, as it proved, the calculus was on the opposite side. In nine cases the operation was nephrotomy, the ureteral calculus having been removed through the incision of the renal substance by pushing it upwards, after failure or otherwise in finding a stone in the kidney itself. In four cases pyelotomy was performed, the stone being pushed up and removed through the renal pelvis. In 29 cases uretero-lithotomy was the method, in four by the trans-peritoneal, in 25 by an extra-peritoneal routes. Of the 25 extra-peritoneal uretero-lithotomies one was rectal, two were vesical, four vaginal, 12 through a lumbar and six through an iliac or inguinal incision. In the 12 cases of lumbar uretero-lithotomies, and in the nephrectomy, nephrotomy, and pyelotomy cases the operation was undertaken primarily with the object of exploring the kidney. In other words, in 28 out of 44 cases an operation was performed in the expectation that the disease was renal; in 25 of them the calculi were accessible and removed through the lumbar incision; in three the kidney was so diseased as to lead to nephrectomy. In one of the four nephrectomy cases the abdominal route was chosen as the kidney was hydronephrotic and formed a large abdominal tumour. In one of the nephrotomy cases the calculus was diagnosed through a previous laparotomy exploration. Of the iliac cases diagnosis had been made by laparotomy previously performed in three; in another the position of the stone was ascertained by vaginal palpation; in another by catheterising the ureter through the loin, and in the sixth case the kidney had been twice explored through the loin and calculi removed at the first operation. It is clear from this analysis that in the great majority of cases a lumbar operation will be the right practice to adopt.

Whether the stone is extracted through the loin, groin, sacral, vaginal, pre-rectal, or vesical route will depend on the part of the ureter in which it is lodged. It is safer to remove it by an extra-peritoneal rather than a trans-peritoneal operation, even when its existence and location have been determined by an intra-peritoneal search. If it is uncertain in which ureter the stone is it is better to examine each through a lumbar incision than by laparotomy. If during an exploratory laparotomy a calculus should be found impacted in the pelvic section of the ureter it should be displaced either upwards above the brim of the pelvis or downwards into the bladder, but it may have to be left for a time in the ureter. Nothing should induce the surgeon to incise a ureter through the peritoneum unless he is absolutely sure of the aseptic state of the urine. He should close the peritoneum and then and there remove the calculus by the retro-peritoneal method, or postpone the removal till the patient has recovered from the laparotomy. There should be no hesitation on this point, for with a calculus blocking the ureter it is impossible to be sure that the urine is aseptic. Indeed, the great probability, to say the least, is that it is not so. Granting that the wound in the ureter has been carefully sutured after a trans-peritoneal ureterotomy (a task by no means easy of accomplishment in the depths of the pelvis) and that the peritoneum has been replaced over the ureter and stitched in position, there can be no absolute security, with septic urine in contact with the wound, that union will follow, and extravasation, and septic peritonitis not be the consequence.

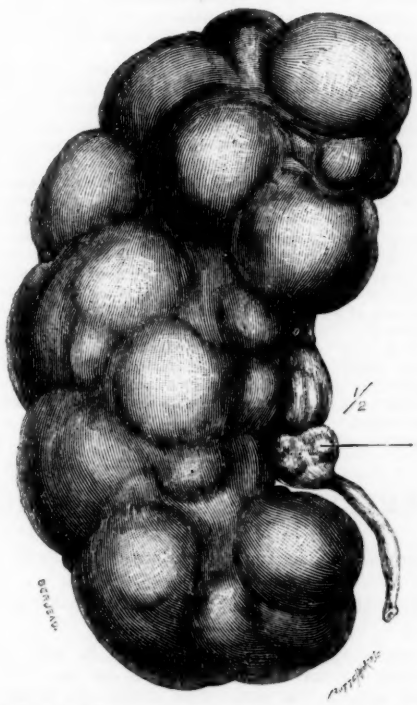
In all cases the calculus should, if possible, be displaced by gentle pressure upwards and removed through an opening in the ureter a little away from the point at which it has been lodged. Here the coats are more likely to be less severely diseased and the ureterotomy wound can be more easily sutured and will be more likely to repair well than a wound at the seat of impaction would be. This practice is of great importance when the stone is below the brim of the bony pelvis, as by displacing the stone upwards it can very readily be removed through the lumbo-iliac incision and the vaginal or the more serious and complicated sacral operation is thus avoided.

When the ureter is blocked near its upper end the calculus, if of a smooth surface and readily moved, should be pushed upwards into the renal pelvis and thence extracted. But this cannot always be safely done, and if the stone is of oxalate of lime and very rough on its surface its inequalities stick into the wall and may cause tearing of the mucous lining of the ureter if any attempt is made to displace the stone upwards. I have had experience of the tenacity with which a small rough stone will attach itself to the ureteral walls. Other surgeons have failed in their endeavours to dislodge a stone and others again have only succeeded with difficulty and with the hand in the peritoneal cavity (Hall and Lane). In one of Israel's cases the ureter was torn from the renal pelvis during the attempt. In Torrey's case the ureter was torn during an attempt to dilate it.

In a good many cases when the kidney is explored a calculus is found at the junction of the ureter and infundibulum, but very moveable, falling into the ureteral orifice and back again into the renal pelvis like a ball valve; such a calculus should be pushed up into the renal pelvis before being removed, as the incision in the renal pelvis can readily be, and should be, closed by sutures. There is no reason to cut the renal parenchyma for the extraction of a stone so placed, although this has been done in several recorded cases. The length of the incision in the ureter will be in proportion to the size of the calculus and should be free enough to allow of its extraction without contusing the edge of the wound in the ureter. The calculus may be assisted out by forceps or a blunt probe or curette. A ureteral catheter should then be passed through the wound along the duct to the bladder below and kidney above so as to make sure of its permeability. If a second calculus is detected an effort should be made to work it gently towards the wound in the ureter; if this is not possible a second incision into the ureter at the place of the second obstruction should be made at the time of the operation if the patient is in a condition to bear a prolongation of the anæsthetic and the shock attending an extension, perhaps a considerable extension, of the original wound or perhaps the adoption of another route to the ureter. Otherwise the second stone must be removed at another time; in that case if the original operation had been undertaken on account of calculous anuria, as the second calculus will be situated lower down, a fistulous opening would have to be maintained until the remaining obstruction had been successfully removed.

Extraction of a stone impacted in the vesical part of its course or in a ureteral pouch should be effected per urethram in the female and by perineal or suprapubic cystotomy in the male. This method was advocated by me in 1884, before the first edition of my book was published, and is said to have been practised by Desault and Garengeot. Unless the patient is very thin and the pelvis shallow the suprapubic operation is to be preferred to the perineal. Tuffier has removed a ureteral calculus in this manner.

FIG. 10.



Disorganised kidney from obstructing of the upper end of the constricted ureter by a stone lodged above the constriction (author's case).

If the calculus is projecting at the ureteral orifice into the bladder it should be drawn out by a lithotrite or forceps or pressed out by the finger in the bladder, assisted by the fingers of the other hand in the vagina or rectum pressing the stone forwards; if this cannot be done the mouth of the ureter and the mucous membrane covering the calculus may have to be incised. If the incision is limited to the tissue covering the calculus on the surface towards the interior of the bladder there should be no fear of injuring the peritoneum or cellular tissue behind the bladder. A small scoop or curette may assist the process of disengaging the stone from the ureter. Whilst using the scoop as well as making the incision the left forefinger in the vagina or rectum should prevent the calculus from slipping away from the ureteral orifice and so being pushed further up the duct, a thing not unlikely to happen, as the ureter will probably be dilated behind the stone.

If stenosis or a stricture of the ureter is present as well as a calculus (Fig. 10) it ought to be treated at once after removing the calculus by the method described in a paper by me in THE LANCET of July 1st, 1899, otherwise nephrectasis or a fistula will persist after the operation.

Cavendish-square, W.

EARLY *v.* LATE OPERATION IN CASES OF INFLAMED APPENDIX.

BY C. MANSELL MOULLIN, M.D. OXON., F.R.C.S. ENG.,
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IT is now a little more than 10 years since Sands, operating within 48 hours of the beginning of the attack, performed the first successful laparotomy for peritonitis consequent upon perforation of the appendix. It is just 10 years since the first series of early operations was reported by McBurney, seven out of eight patients recovering. Since that time, more especially since McBurney's paper containing a report of 24 early operations, 23 of which recovered, was read before the New York Medical Society in 1891, it has become recognised that in a large proportion of these cases operation is the only treatment possible. The general principle is admitted everywhere; but with regard to details—whether the patient should be operated upon during the first attack or soon after it or whether he should be allowed to run the risk of a second and even of a third attack, and especially as regards the time when the operation should be performed—there is great divergence of opinion.

In America it is generally held that laparotomy is advisable as soon as the diagnosis of progressive inflammation of the appendix is certain. Even if the progressive character of the attack is doubtful it is better to err on the side of safety. Any case, whether in its first attack or not, which shows definite signs of increasing disease 36 hours after the beginning, should be operated upon without further delay. In Germany Carl Beck and others who have written recently upon this subject hold the same view. It is better to operate too early than too late according to Strümpell. But in England neither early operation nor operation during or after the first attack is in favour. Unless the symptoms are so imperative that delay is out of the question it is better to wait at least until the fifth day. Both of these views cannot be correct, the difference between them is far too great. If it is right to wait until the fifth day in all but absolutely imperative cases it is wrong to make a rule of operating at the end of 36 hours. One or other, or perhaps both, must be modified.

It is worthy of note that the two recognised authorities on the pathology of this question, Hawkins and Kelynack, do not speak by any means strongly in favour of delay, but rather the reverse. Hawkins concludes that if all his relapsing cases (59 out of 264) had been operated upon during or immediately after the first attack seven lives would have been saved and 52 other individuals would have been spared a more or less severe illness, provided, of course, that these 59 early laparotomies had terminated favourably. "If the mortality of the operations is so small that it may be neglected, and if I am wrong in doubting its efficacy in preventing fatal peritonitis, it must then be admitted that excision in the first two days of illness is the true and rational plan of treatment." And Kelynack, after mentioning cases

in which diffused peritonitis or local suppuration is present, advocates operation also in rapidly progressing cases, quickly leading to gangrene, "in order to forestall the perforation."

Statistics, it is sometimes said, never prove anything, or prove everything equally well; but this at least must be admitted, that the evidence they give, for what it is worth, is decidedly in favour of early operation.

The general mortality among cases sufficiently severe to be admitted into hospital is estimated at from 14 per cent. (Hawkins) to 20 per cent., and even higher. (In private practice and in the services where every case, no matter how mild it may be, is reckoned the percentage is a good deal lower.) Of these cases a certain proportion begin acutely and show signs of improvement before 36 hours have passed. No one, so far as I am aware, proposes to operate upon these at any rate during their first attack. The inflammation is not progressive. They must therefore be excluded in an inquiry of this kind, and this, by diminishing the total without affecting the number of cases in which suppuration or peritonitis [occurs makes the proportion more unfavourable. Can it be imagined that if all these cases (with the exclusion of those which began to improve within the specified time) had been operated upon at the end of 36 hours (I do not say this would have been possible; unfortunately in hospital practice it is not, for only too many of the patients do not apply for relief in time)—can it be imagined that the mortality would have been as high as 14 per cent.? Would it not have been more nearly 5 per cent., or even 2 per cent.?

This is met at once by the answer that it is unjustifiable to perform such a number of unnecessary operations. This would finish the matter at once if it were proved that the operations were unnecessary; but it is not. It is merely assumed. It is easy to be wise after the event and to point out after the patient has recovered that an operation was unnecessary. But this is not the point. This question has to be settled in each individual case at the beginning of the attack, when the future course of the disease is quite unknown and it is impossible to tell what may happen. It is admitted by all that, with the exception of the most severe cases, no one can predict what result may follow when the appendix is inflamed. Suppurative peritonitis may break out suddenly even in the mildest cases. The question, therefore, whether operation is unnecessary or not must be answered at a time when the result of the disease cannot be foretold. The answer at that time is hardly likely to be so positive. It may be wise to allow the patient to run the chance of recovering without an operation; but the opposite opinion is at least admissible. It is certain that cases occur in which the fact that operation has been postponed is a source of the deepest regret. For some time past I have advocated operation at the earliest possible opportunity in all those cases which have not shown definite signs of improvement within 36 hours and I have not yet met with one of which the contrary statement could be made. On the other hand, I have been sufficiently fortunate to find gangrene of the appendix before general peritonitis had set in and to have saved the patient from this almost inevitably fatal complication. Mynter of New York has published notes of 13 such cases, all of which were saved by operation, out of 53, so that they are not uncommon.

The first essential is to form an estimate of the number of patients who make a permanent and complete recovery without operation. Of course, no case which relapses or in which a hard and tender mass persists in the iliac fossa, or in which there is a sense of uneasiness in that region after exercise can be counted. I know, for instance, a patient who nearly 50 years ago suffered from a severe attack, and who has never had a second, but he has not recovered. There is still a mass to be felt in his iliac fossa. By dint of the utmost care as regards diet, the condition of the bowels, and exercise, the danger has been escaped so far, but this has only been possible because of the exceedingly favourable circumstances in which the patient is living, and because he is both willing and able to take the most minute precautions. Recovery, when it is wished to institute a comparison between cases which are operated upon and those which are not, must be complete and permanent.

The number of cases which relapse is very large, as every one will admit. The estimates given by different observers vary from 30 per cent. to 60 per cent. As it is not possible to keep patients under observation sufficiently long to prove that they will never have another attack an estimate of this kind can only be formed by inquiring when a patient presents himself whether he remembers ever having suffered in a similar manner before. It is manifest that there are numberless sources of fallacy and this probably accounts for the very great discrepancy in the results. If all the slighter cases and those which definitely improve within 36 hours (which are naturally the least likely to suffer from relapses) are left out and only the graver ones (in which alone does the question of the advisability of operation arise) are taken into consideration, there can be little doubt that the proportion of relapses would be very much nearer the higher figure than the lower. Suppose for an instant that it is only 50 per cent., the case then stands thus. Taking 100 cases, such as are usually admitted into hospital, 28 (Hawkins) will suffer from local suppuration or diffuse peritonitis and be operated upon. Of the remaining 72 cases 36 patients, or more than one-third of the whole, will suffer from one or more relapses, in each of which they will incur the same risk again, and each of which will lay them in bed for an average period of 25 days. It seems to me to require some hardihood to assure a patient at the beginning of an illness of which the course and termination are entirely uninfluenced by medical treatment that an operation is unnecessary when, even if he gets off with his life, the chances of his making a perfect recovery without operation are little better than one in three.

One or two other points are worthy of attention in connexion with this question. The cases which recover are often spoken of as "non-suppurative." This is pure assumption and quite unjustified. Suppuration occurs in a very much larger proportion of cases of inflamed appendix than is usually believed. In many of these the abscess bursts suddenly into the bowel with instantaneous remission of all the symptoms; in others the pus gradually becomes inspissated and dried up. Many times in operating upon chronic recurring cases I have been astonished at finding a latent collection of pus which, so far as I could ascertain, had not given rise to any of the ordinary symptoms of suppuration during the course of its formation. It is true that many of these cases recover without operation, but it is not good surgery to leave an abscess in close proximity to the general peritoneal cavity in the hope that it will not burst into it.

And another argument in favour of early operation is the very grave effect upon mortality which the postponement of the operation exerts in the case of those who, because of suppuration or of diffuse peritonitis, come to operation at last. In nothing is the disastrous effect of delay more clearly shown. Nor is this merely a general impression. Fowler,[1] analysing 127 cases, showed that 83 per cent. recovered of those patients who were operated upon in the first three days; 60 per cent. of those operated upon on the fourth day; 58 per cent. of those operated upon on the fifth and sixth days; 50 per cent. of those operated upon on the seventh and eighth days; and only 33 per cent. of those operated upon on the ninth and tenth days. As Murphy has phrased it, one-half of all the patients who would have recovered by operation will die if we wait until the sixth day.

If in a case of inflamed appendix 36 hours have passed without definite improvement having shown itself the responsibility for the consequences must, it seems to me, rest with those who recommend that an operation should not be performed.

Wimpole-street, W.

HÆMATO-CHONDRO-SARCOMA OF THE RIGHT SCROTUM:

CASTRATION; RECURRENT TUMOURS; INJECTION OF COLEY'S FLUID; DEATH.

BY MONTAGUE MAKUNA, M.R.C.S. ENG., L.R.C.P. LOND.

A MAN, aged 23 years, apparently in good health, consulted me for a painful tumour on the right side of the scrotum on Feb. 23rd, 1899. He stated that seven years previously he noticed a swelling of the size of a walnut and somewhat triangular in shape by the side of his right testis. He did not remember having received any injury to the scrotum. The swelling remained painless but gradually grew into a pyriform shape

[1] Annals of Surgery, May, 1899.

with a constriction in the middle till about two years ago, when it commenced to extend upwards in the inguinal canal in the shape of a hard cord. He did not suffer from any pain or any special inconvenience and followed on regularly his occupation, keeping his condition a secret to himself. About December, 1898, he noticed that the tumour was getting tense and the constriction in the middle of the scrotum gave way. He became less active, depressed in mind, and suffered from pain due to tenseness of the tumour, which compelled him to give up his work about the beginning of February, 1899, and to take his father into his confidence as to his sufferings.

The patient was put in a recumbent position and the tumour was examined. Although it was tense there was a distinct sense of fluctuation and it was opaque to light. The right testis was of about the same size as the left and was drawn up on the outer side of the tumour. The constriction was about two inches below the testis, and just below this the tumour measured 13 inches in circumference and nine inches in length from the external inguinal ring to its lowest part. There was absence of lumbar or of any abdominal pain. The very slow and painless growth of the tumour, the presence of constriction in the middle till a very recent date, together with distinct fluctuation, made diagnosis as to the nature of the tumour very difficult. The following day it was tapped about two inches above the lower end and 10 ounces of sanguineous fluid were removed. This relieved the tension, but it also made evident that the patient must be prepared for a serious operation. On March 1st he was put under chloroform by Dr. W. Hartland of Port Talbot. An incision about four inches in length was made on the outer side of the tumour and just below the testis. On cutting into the tumour it was discovered that its structure was tough and cartilaginous. The incision was extended above to the external abdominal ring and below to the lowest part. The whole mass was gently evulsed out from the scrotal sac by the hands to save hæmorrhage and a strong ligature was applied at the upper end and cut off. This facilitated the removal of the portion in the inguinal canal. The cord was drawn down, the tumour was removed, a strong carbolised catgut ligature was applied and the cord was allowed to retract. The scrotal cavity was washed out with carbolic lotion and as there was some oozing of blood the cavity was plugged with carbolised sponges and the edges of the wound were brought together by three silver sutures. The stump was dressed with double cyanide dressings. In scrotal tumours I find evulsion by hands to be a much better operation than dissection, as the removal is easy and the hæmorrhage is much less. Again, as there is a large bleeding surface and a considerable amount of cellulitis after the operation ending in suppuration, it is better to allow free openings for the discharge than to use drainage-tubes, and subsequently to bring the edges closer together.

On March 4th the first dressings were taken off the sponges and clots of blood were removed from the wound and the cavity was flushed out with carbolic lotion and redressed. The dressings were changed on the 7th, when suppuration set in, and they were again changed on the 10th, 12th, and 15th, when it was found that the suppuration had subsided. The wound was insufflated with iodoform and the edges were brought closer together by silver sutures. Dry dressings were applied on the 22nd and on April 2nd. The patient was out of bed wearing a suspender on the 8th. He kept on improving in health and going about. His temperature, which had varied from 99° to 101° F., was now normal. On May 24th a swelling in the right hip and thigh was noticed, accompanied with pain, and the temperature rose to 101°, simulating rheumatism of the hip-joint. These symptoms continued with occasional relief till the end of June, when an irregular swelling was distinctly perceptible in the right iliac fossa. It rapidly extended to within an inch of the umbilicus. The patient also complained of severe pain over the præcordial region. A small tumour of about the size of a nutmeg also re-developed in the scrotum. The patient was losing flesh and the case appeared to be a hopeless one. Having lost three cases of sarcoma of the scrotum, successfully operated on, by its recurrence within the abdominal walls, I was tempted by perusal of the excellent treatise on the subject by Mr. C. Mansell Moullin to adopt Coley's treatment by injection of mixed toxins.[1] I obtained Coley's Fluid from the Jenner Institute of Preventive Medicine and commenced the injections on July 11th, using half a minim. They were repeated and on the 13th one minim was given, on the 15th two minims were given, on the 17th three minims, on the 20th four minims, on the 22nd five minims, and on the 25th six minims, with the result that the patient had the desired reactions, the temperature rising to 103°. On the 27th the course of the right inguinal canal was tense with fluctuation and the swelling in the iliac fossa was smaller and softer. On the 31st the reaction had subsided. The injections were again continued on August 1st, 4th, and 7th, followed by marked rigors, rise of temperature, and erysipelas of the scrotum and right thigh. The right lower extremity became œdematous. The injections were again repeated on the 15th and 17th with the result that the tumour in the scrotum was much reduced in size and the abdominal dulness was less marked. On the 20th about a pint of dirty, purulent discharge came away through the inguinal canal, giving the patient some relief, but this was followed by marked prostration. He succumbed on the 23rd. All through his last illness he complained of pain over the præcordia, but its cause could not be ascertained by clinical examination. Although the case unfortunately ended fatally Coley's treatment had marked influence on the insomnia, the acute pain, and the size of the tumours. The end was characterised with less bodily and mental affliction than I had hitherto noticed in similar cases.

Mr. C. Mansell Moullin kindly examined the tumour microscopically and pronounced it to be an undoubted case of sarcoma.

Treherbert, South Wales.

[1] American Journal of the Medical Science September 1896.

NEUROLOGICAL FRAGMENTS.

BY J. HUGHLINGS JACKSON, M.D. ST. AND., F.R.S.,
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(*Continued from* THE LANCET *of Jan. 14th, 1899.*)

No. XIX.

A CASE OF LEFT HEMIPLEGIA WITH TURNING OF THE EYES TO THE RIGHT—SLIGHTLY GREATER AMPLITUDE OF MOVEMENT OF THE LEFT SIDE OF THE CHEST IN INSPIRATION PROPER AND SLIGHTLY LESS AMPLITUDE OF MOVEMENT OF THAT SIDE IN VOLUNTARY EXPANSION OF THE CHEST.

IN some cases of hemiplegia, recent and old, there are conditions which, I think, support the hypothesis I advanced in THE LANCET of Feb. 23rd, 1895 (Neurological Fragments, No. 15), as to the great difference of the nervous mechanisms for the two very different services, Organic (respiratory) and Animal (voluntary) of the respiratory apparatus; this apparatus I prefer to call the Thoracic Cage, or briefly Cage, because some movements of it, the "voluntary" and the "emotional," are evidently not movements of respiration proper. I there (Neurological Fragments, No. 15) gave particulars from 28 cases of old hemiplegia, some right and some left, which Dr. W. H. Stoddart and I had investigated with regard to the hypothesis. The facts in cases of hemiplegia or, rather, in a few of them, are that the uppermost part of the costal region of the Cage moves more, very slightly more, on the paralysed side of the body in Respiration Proper (ordinary breathing), and less, very slightly less, on that side in Voluntary Expansion of the Cage (the so-called, the mis-called, "deep inspiration" or "forced inspiration" of auscultators). I will illustrate by a case of left hemiplegia.[1] The greater amplitude of movement of the left upper cage in respiration proper is, I suggest, owing to destruction of some fibres from the cortex[2] which are for *continuous* inhibition of the left respiratory (medulla) centre;

[1] I am speaking of amplitude of the movements, not of course of rate of succession of movements.

[2] For information on cortical inhibition of the respiratory centre, see "The Effect Produced upon Respiration by Faradic Excitation in the Monkey, Dog, Cat, and Rabbit," by W. G. Spencer. Transactions of the Royal Society, vol. clxxxv., 1894, B pp. 609 to 657. I gave quotations from this paper in THE LANCET of Jan. 14th, 1899. I suggest that the increased respiration in early stages of surgical anæsthesia is owing to impairment or loss of function of W. G. Spencer's cortical arrest centre.

the less amplitude of voluntary expansion of that left upper cage is, I suppose, owing to destruction of some motor fibres from the cortex which, evading[3] the respiratory centre, pass direct to certain left anterior horns and by these act on the intercostal muscles.[4]

Respiration proper is very efficiently, I do not say solely, done by centres of the lowest level. Voluntary Expansion of the Cage (drawing in the breath when told, or fixation of it (costal region) in a high attitude during "effort" whilst lifting a weight) is, as the word voluntary implies, of cerebral, cortical, initiation. It must not be forgotten that, notably in the male sex, there is visibly a great difference in the two kinds of movement in normal conditions; in adult males respiration proper is mainly abdominal, whilst "voluntary" expansion of the chest is in both sexes almost solely costal. I have (THE LANCET, Dec. 22nd, 1894) published a case of supposed pneumonia (I saw the patient with Mr. H. C. Wilkin) in which there was loss of the respiratory movements (bilateral) of the intercostal muscles (the breathing was abdominal) and yet there was perfect movement (bilateral) of these muscles in Voluntary Expansion of the Cage (drawing in the breath when told). Dr. Thomas Barlow confirmed these observations. This case seems to me to demonstrate that the nervous mechanism for the respiratory (respiration proper) and that for the non-respiratory ("voluntary") movements of the Cage are different. As this is the only case of the kind I have seen, heard of or read of, I will say no more of it at present.

The two phenomena mentioned as occurring in some cases of hemiplegia were well displayed in the recent left hemiplegia of a woman, aged 44 years, whom I saw with Dr. A. T. Schofield on Dec. 7th, 1894. The paralysis set in during the night of Dec. 3rd–4th. When we saw her together there were, in addition to complete paralysis of the left arm and leg, turning of the eyes to the right and incomplete double ptosis; she brought her eyes back to the middle line when told to look to the left and could raise the fallen lids, but not fully. As to her face, we noticed that in talking the right side of her mouth moved more than the left. She could only be got to protrude her tongue for about half an inch beyond her teeth. There was no aphasia. There was considerable hebetude which (she not exerting herself fully) prevented our obtaining precise information about the paralysis of her face and tongue. These symptoms (hemiplegia, great in range and, as to the limbs, perfect in degree) betokened a destruction of many fibres of the right internal capsule, that is of fibres extrinsic upwards of the lowest level; or, it may be better to say in this connexion, of many motor fibres interconnecting motor centres of the owest level and motor centres of the middle level (Rolandic region) of the Cerebral Sub-system. There would be also, I submit, destruction of some inhibitory—negative motor—fibres from the right cortex to the left half of the respiratory centre. Her temperature was normal, her pulse was 60 and it occasionally intermitted. Her breathing (I stupidly forgot to note its frequency) was quiet and of the costal type proper to her sex. Now for the two abnormal movements of the thoracic cage, those mentioned in the first paragraph as occurring in some cases of hemiplegia. The uppermost part of the costal region of the thoracic cage moved more on the left side in respiration proper (organic service of the cage) than did that part on the right. But when she drew her breath when told to do so (animal service of the cage, "voluntary" expansion, non-respiratory movement) the uppermost part of the costal region of the cage on the left moved less than the right. Heretofore I had limited search for these two different movements (of one set of muscles) in cases of hemiplegia to the uppermost part of the costal region of the thoracic cage. In this patient the lower part of the costal region on the left moved more than the right in respiration proper and less than the right in "voluntary" expansion of the cage, that is, the movements were of the same kind as those of the left uppermost part. I asked Dr. Schofield to make observations on the movements of the two sides of the patient's chest, not telling him what I had observed. He came independently to the same conclusion as I had done.[5]

I wish to impress on the reader that the degree of difference in the abnormal movements of the uppermost part of the chest on the two sides in this and in other cases of hemiplegia in which I have found the "double difference" is trifling, sometimes trivial. As I pointed out in THE LANCET of Feb. 23rd, 1895, we could (in accord with Broadbent's well-known hypothesis on representation of the bilaterally acting parts of both sides of the body in each half of the brain) expect there to be only a slight difference in the action of the two sides of the chest in cases of hemiplegia from lesion of one internal capsule. I have seen many cases of hemiplegia in which I discovered no difference in the movements of the two sides of the chest. And I have seen many cases in which with slightly less upper costal movement on the paralysed side of the body in "voluntary" expansion of the cage, there has not been any greater upper costal movement on that side in respiration proper. So many exceptional cases will render difficult the acceptance of the hypothesis for some cases of hemiplegia.

[3] It is right to say that this view is not that taken by physiologists. Foster says, "Physiology," fifth edition, Part 2, p. 603: "It is probable, though perhaps not distinctly proved, that when we breathe voluntarily, or when by an act of the will we hold the respiratory apparatus in any one respiratory phase, the nervous impulses, generated by the will, do not pass down by a direct and independent course to the respiratory muscles, but that the will makes use or modifies the activity of the medullary and spinal nervous respiratory mechanisms." Marckwald ("The Movements of Respiration," p. 120, translated by Mr. Thomas Haig) thinks it probable that fibres of the phrenic nerves carry stimulations direct from a motor centre of the surface of the brain, in their passage downwards evading the respiratory centres.

[4] During this process of voluntary expansion of the cage there is supposed to be also great cortical inhibition of the whole respiratory centre of both halves; in effect of both halves, for if the inhibition be to but one-half the other half will be affected (Broadbent's Hypothesis). For speculations as to two kinds of cortical inhibition, the continuous and the occasional, of the respiratory centre, see THE LANCET, Feb. 23rd, 1895.

[5] Dr. Schofield has been so good as to look over this paper and tells me that I am correct in what I say of his observations.

ON THE SURGICAL TREATMENT OF THE ASCITES OF CIRRHOSIS BY THE ARTIFICIAL PRODUCTION OF PERITONEAL ADHESIONS.[1]

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IN the following paper we propose to give a brief account of two cases treated according to the method introduced by Dr. D. Drummond and Mr. J. R. Morison[2] and to offer some remarks on points of interest, especially on the technique of the operation and on the *rationale* of the treatment.

CASE 1.—A man, aged 45 years, was admitted to St. George's Hospital on June 22nd, 1899, having vomited about three quarts of blood in the previous 48 hours. He had been accustomed to take three or four glasses of beer a day, had had syphilis 27 years ago, and had scars around the left knee. There had been no previous attacks of hæmatemesis. The spleen was readily felt to be enlarged; the liver was not enlarged, there was no evidence of gastric ulcer, and he was accordingly treated for hæmatemesis due to cirrhosis. During the next six weeks he remained in bed with a raised temperature for which no cause except cirrhosis was forthcoming. His abdomen became distended with flatus so that the spleen could no longer be felt; about three weeks after admission there were œdema of the feet and ascites. Iodide of potassium was given but it in no way improved his condition, and after consultation it was decided, with the patient's full approval, to perform laparotomy and to set up artificial adhesions between the liver and the parietal peritoneum.

On the morning of July 31st the abdomen was tapped and 16 pints of ascitic fluid were withdrawn. Mr. Turner opened the abdomen by an incision five inches long parallel to, and a finger's breadth below, the right costal margin. The peritoneum, although there was no peritonitis, was much injected. A large quantity of clear ascitic fluid was evacuated. The liver was markedly hobnailed but was free from adhesions. Its surface and that of the diaphragm were scraped with the finger, sponge, and director as far as

[1] A paper read at the Medical Society of London on Dec. 11th, 1899.

[2] Brit. Med. Jour., vol. ii., 1896, p. 723.

could be reached on both sides of the suspensory ligament. A kangaroo tendon was then passed through the edge of the liver, the omentum, and the cut parietal peritoneum, and the three structures were tied together so as to bring the omentum up between the liver and the diaphragm. The peritoneum was then sewn up separately with the continuous catgut suture and the muscles were united by interrupted catgut and the skin by silkworm-gut and continuous horse-hair stitches.

After the operation the patient steadily improved and left the hospital on August 27th. He now feels much better in health but still has enlargement of the spleen. He has been a little depressed in mind at times without, he thinks, adequate cause; the only complaint is of occasional dragging, possibly due to the adhesions in the right hypochondrium. He has been recently seen (Dec. 11th) and no longer complains of this symptom. In every way he is much improved and his splenic dulness is much less than formerly. There are, however, a trace of ascites and some œdema of the feet.

CASE 2.—A Frenchman, aged 52 years, was admitted to St. George's Hospital on June 21st, 1899, with ascites of two months' duration and œdema of the feet of two weeks' duration. For four months he had had morning vomiting and pain over the liver and for two months the amount of urine had been scanty. Syphilis was denied, but he admitted to having taken whisky occasionally and large quantities of wine in Paris. The latter point was of interest in connexion with Lancereaux's theory that cirrhosis is not due to alcoholic drinks, but to the sulphate of potash with which the *vin ordinaire* of Paris is plastered.[3] The patient's abdomen was greatly distended with ascitic fluid and four days after admission 18 pints were drawn off; 12 days later the abdomen was again quite full of fluid and as the patient's general condition was deteriorating and his strength failing the question of operation was raised and Mr. Turner agreed to operate.

On July 14th the abdomen was opened by a vertical incision in the right semilunar line. On opening the peritoneum a large quantity of turbid yellowish ascitic fluid escaped. The liver was markedly cirrhosed. Its upper surface and that of the neighbouring diaphragm were scrubbed with a sponge and scratched with the finger-nail and director. The margin of the liver was fixed to the abdominal wall by a kangaroo tendon suture and the wound was united with silkworm gut passing through the whole thickness of the tissues.

The patient recovered well from the operation, but 10 days after it there was free fluid in the peritoneal cavity which increased so rapidly that two days later paracentesis to 16 pints was required. The fluid was turbid from the presence of numerous leucocytes; there was no fat in the ascitic fluid, as was shown by extraction with ether. After this time (July 29th) the patient was tapped five times and went out of the hospital on Sept. 20th. When heard of in the middle of November the patient was ill in bed with a distended abdomen and œdema of the legs.

RESULTS.

Of the two foregoing cases one of the patients improved, lost the ascites almost entirely, and felt much better in health, but was left with an enlarged spleen, so that he cannot as yet be regarded as cured. Talma,[4] in fact, under similar circumstances did a second laparotomy and sutured the spleen to the abdominal parietes with the result that the organ diminished in size. In our other case the ascites recurred again and again, and though the patient's general state was much better than before the operation, when it appeared that life would not be much prolonged, the result can at best be regarded as only slight amelioration. One of Dr. Drummond's and Mr. Morison's patients lived for 19 months after the operation, having required 69 tappings.

In estimating the effects of the operation in such cases there is, perhaps, some danger in regarding the prolongation of ascitic life as due to the operation. It is true, as Dr. Hale White[5] has shown, that the subjects of pure cirrhosis seldom live to be tapped more than once or twice, but occasionally patients with ascites due to cirrhosis do recover, and the exceptional event must be reckoned with in considering the effects—especially when they are slight—of the operative treatment. It might, indeed, be suggested that the mere fact of opening the abdomen so alters the conditions there that, as in tuberculous peritonitis, this measure is sufficient to lead to a cure. But the abdomen has been opened a considerable number of times as a result of an erroneous diagnosis of ovarian cyst, &c., and when ascites and cirrhosis were discovered the abdomen has been closed. These cases, so far as we know, do not show any improvement, so that "abdominal section as a medical measure" does not appear to be of any use in hepatic cirrhosis without some further steps.

Of the previously published cases, 10 in number,[6] four (Drummond and Morison, Morison, Talma, and Neumann,[7]) of the patients have recovered, while of the remainder three at least died from the effects of the operation. The operation has to our knowledge been performed with a subsequent fatal result (the post-mortem examination showing an almost complete absence of adhesions) and it is possible that the published results are more favourable than the complete record of all cases thus treated would be.

EARLY PERFORMANCE OF OPERATION DESIRABLE.

It is important that the operation should be done comparatively early and not postponed until the patient is too debilitated to withstand it, for patients with cirrhosis are far from good subjects, inasmuch as they are prone to secondary infections, especially to peritonitis. Thus of the ten cases published, two patients died from peritonitis and one from shock immediately after the laparotomy. Another reason for not delaying operative interference is the importance of intervening before the liver tissue is so degenerated that it is unable to undergo compensatory hyperplasia as the result of the improved blood-supply provided by the adhesions; this point will be referred to later. Medical measures should only be persisted in while the diagnosis is open to doubt, and they should be specially directed to counteract any possible syphilitic disease of the liver. When a course of iodide of potassium has not benefited a case of ascites which is thought to be due to either syphilis or cirrhosis medical treatment should be suspended and operative measures employed.

When cirrhosis can be diagnosed with fair certainty in the pre-ascitic stage and when there are evidences of the disease, such as hæmatemesis and splenic enlargement, operative interference would probably succeed better than in the late stages. Of our two cases the one operated upon earlier did the better. We are therefore inclined to believe that the early treatment of cirrhosis of the liver by operation has a future before it

TECHNIQUE OF OPERATION.

Of the two cases which we have recorded the patient on whom an oblique incision skirting the costal margin was made, and whose omentum was stitched between the liver and diaphragm, did the better. The oblique incision would seem to give better access to the upper liver surface on both sides of the suspensory ligament and to enable the omentum to be stitched on that surface between it and the diaphragm better than does the one in the semilunar line, and it consequently is the one that we would recommend to be practised in the future for such cases. We would venture also to urge that such stitching of the omentum, the liver, and the abdominal parietes together is much more likely to be followed by the attainment of effective vascular adhesion than the mere stitching of the omentum to the abdominal parietes. The cirrhotic liver bleeds but little on passing the stitches, and we regard adhesion between it and the omentum to be most effectively obtained by this method.

With regard to suprapubic drainage our opinion is that this is necessary in cases where there is a large amount of fluid present and where there has been a rapid re-accumulation after previous tappings. It is quite possible that had this measure been practised in the second of the two cases the result might have been better. Both of the patients after the operation were kept as far as possible in the sitting position. And this we would suggest is obviously more advantageous than the recumbent one, as it must tend to allow of the more satisfactory formation of adhesion of the stitched structures in the upper abdomen.

With regard to the advisability of a secondary operation on the spleen it may be interesting to note that the size of the spleen in Case 1 has markedly diminished since the

[3] Bulletin de l'Académie de Médecine, 1897-1898.
[4] Berliner Klinische Wochenschrift, Sept. 19th, 1898.
[5] Guy's Hospital Reports, 1892.
[6] Weir (Medical Record, Feb. 4th, 1899) summarises the results of six previously published cases and adds one of his own.
[7] Deutsche Medicinische Wochenschrift, June 29th, 1899.

operation, and this fact is perhaps an argument for at least delay before deciding to follow Talma's example. How far the splenic improvement is due to the operation on the liver must be uncertain. In the cases hitherto published in one case the gall-bladder has been stitched to the abdominal parietes. The cases given here, however, would seem to be the first in which the stitches have been passed through the liver substance, the omentum, and the abdominal peritoneum.

DISCUSSION OF THE MANNER IN WHICH THE OPERATION IMPROVES THE CONDITION OF THE PATIENTS.

Does the improvement both in the general health and in the local condition—viz., the disappearance of ascites—simply depend on the collateral circulation relieving the pressure in the portal vein? This was the assumption on which Dr. Drummond and Mr. Morison planned their operation, and more recently it has been emphasised by Weir. Against this it may be argued (*a*) that ascites does not occur when the blood-pressure is presumably highest in the portal vein—viz., earlier in the course of the disease when hæmatemesis is met with; and (*b*) that ascites is a late manifestation and appears to be rather a result of a toxæmic condition of the blood than a mere mechanical result of increased portal blood-pressure, and that it is the outcome of a poison in the blood exerting a lymphagogue action.[8] The toxæmic state depends on hepatic insufficiency—in other words, on the cirrhotic liver being unable to destroy poisons that are continually passing to it from the alimentary canal; these poisons, therefore, reach the general circulation and lead to œdema of the feet, ascites, and to the constitutional nervous symptoms of the late stages of cirrhosis. If the collateral circulation between the peripheral parts of the portal vein and general systemic veins is markedly increased less blood will go through the liver and the toxæmia will be increased. In fact, the collateral circulation between the portal and the general venous system is carried to its logical conclusion in Eck's fistula. In this experiment the portal vein is interrupted in the portal fissure; its proximal end is closed while its distal end is put into communication with the inferior vena cava. In other words, the portal circulation through the liver is short-circuited and all the blood from the intestinal area enters directly into the inferior vena cava, as shown by the very successful experiments of Hahn, Nasse, Nencki, and Pawlow.[9] In dogs this procedure tends to induce a disposition to uræmia. Thus if the dogs were fed on meat severe nervous disturbance, depression, asthenia, clonic and tonic spasms, and coma were brought on and sometimes, indeed, ended in death. It is noticeable that one of Mr. Morison's[10] patients was alternately excited and depressed for three weeks after the operation; this was regarded as due to intestinal products passing directly into the general circulation without the intervention of the liver.

Thus, though an increase in the collateral channels between the portal vein and the systemic veins might modify the engorgement of the portal vein it would not tend to improve the general state of health but would have rather the opposite effect. Inasmuch, therefore, as ascites is not a mere mechanical result of increased pressure in the portal vein, and as a very extensive communication between the portal vein and the general venous system leads to a deterioration of the general health, it appears that the good effects of the collateral circulation are not solely due to relieving the pressure in the portal vein.

It seems to us that there are two possible ways in which the development of a collateral circulation in adhesions around the liver may be beneficial to the economy. 1. By somewhat diminishing the flow of blood through the liver it may enable that organ to deal more satisfactorily with the blood passing through it, and so reduce the toxæmic condition of the blood which is probably the important factor in inducing ascites. 2. That the increased vascular supply to the surface of the liver may, by improving the nutrition of the hepatic cells, enable them to undergo compensatory hyperplasia. The compensatory hypertrophy of the liver[11] will enable the organ to perform more efficiently its important antitoxic functions and so lead to a latency of the symptoms. If the last hypothesis be true it is evidently of importance that any operation for the formation of vascular adhesions around the liver should be undertaken before the liver tissue is so disorganised that compensatory hyperplasia is impossible.

[8] Cf. Hale White: Clinical Journal, April 26th, 1899.

[9] Archiv für experimentelle Pathologie und Pharmacologie, Band xxxii., S. 161, 1893.

[10] THE LANCET, vol. i., 1899, p. 1426.

[11] It is interesting to note that in a case of hepatic cirrhosis, in which it was suggested that the symptoms were arrested as the result of universal peritoneal adhesions, the liver weighed 89 ounces and presented nodules on its surface which may be interpreted as due to compensatory hyperplasia of the liver cells. The patient died from poisoning by mussels. (F. P. Weber, St. Bartholomew's Hospital Reports, vol. xxxiv., p. 321.)

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A RARE FORM OF FRACTURE OF THE LOWER END OF THE RADIUS.

BY JAMES B. CLARKE, M.B., CH.B. VICT.

EARLY in August a patient came under notice suffering from an injury to the wrist which he had sustained from a bicycle accident. The wrist was considerably swollen and increased somewhat in the transverse diameter. On inspection it slightly resembled a Colles's fracture. There was an appreciable shortening of the forearm and no crepitus whatever could be obtained. Flexion of the wrist was very painful and limited, but pronation and supination could be managed without much difficulty. The accompanying illustration is reproduced from a radiogram which was taken by

Radiogram showing a rare Λ-shaped form of fracture of the radius.

Mr. Alfred H. Marsh and shows an unusual condition. The lower end of the radius presents a Λ-shaped fracture, separating the styloid process and adjoining articular surface for the scaphoid from the articular surface for the semilunar bone. The previous history may shed a little light on this unique fracture. 15 years ago the patient broke his arm (probably a Colles's fracture) in the East Indies and was entirely unattended medically. This is shown in the radiogram by a slight darkening in the radius about the usual situation of a Colles's fracture. The patient stated that this left a permanent deformity, which existed at the time of the recent accident. The old injury may have given the radius unusual strength at the site of the old fracture, so that instead of giving way and causing an ordinary Colles's fracture the carpus was driven upwards like a wedge, splitting the radius in the manner shown. The wrist was tightly put up in plaster-of-Paris for a fortnight and for another three weeks in a poroplastic splint, making a perfectly good recovery.

I have never seen a similar case reported or one that does

more to prove the utility of the x rays in the diagnosis and treatment of obscure fractures.

Northwich.

A FŒTAL ANOMALY.

BY PERCY SHELLEY, M.R.C.S. ENG., L.R.C.P. LOND.

AN account of the following curious specimen of a monster may be interesting. I have never seen such a one in a museum or heard of a similar case in practice. A male fœtus of six and a half months' was born in the right mento-anterior position. The arms and legs had to be released and great care was required so as not to tear the perineum. When the legs were released the fœtus did not come away and had to be extracted by force, gently applied, when a curious mass appeared. There was a spina bifida in the lumbar region and apparently no sacrum or coccyx. The mass was some 16 inches in circumference and seemed to enclose and envelop the lower extremities. Its surface was smooth in appearance like the fœtal side of a placenta covered with veins and its texture was spongy. At its lowermost end there was a rent from which venous blood poured as out of a bladder which had been torn when full. The fœtus was born alive and lived for five minutes. The placenta was covered with caseous tuberculous masses. There was an immense quantity of liquor amnii. The mother suffers from pulmonary phthisis. I had not the opportunity given me for preserving this curious specimen. I may add that in my opinion the child would never have been born at full time without possibiy a Cæsarean section on account of the extraordinary development of the lower parts; as it was the labour was a most difficult and trying one.

Witheridge.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procœmium.

GUY'S HOSPITAL.

A CASE OF CARCINOMA OF THE RECTUM; COLOTOMY; DEATH FROM SUPPRESSION OF URINE OF 21 DAYS' DURATION.

(Under the care of Mr. L. A. DUNN.)

THE long duration of life in this case after obstructive suppression of urine is very remarkable, though it appears to have been slightly exceeded in one other instance. The contrast to these afforded by the speedy termination of cases of "non-obstructive" suppression is always very striking and the true pathological explanation has not yet been discovered. Equally remarkable are the cases in which in error the sole surviving kidney has been removed; patients in whom this has occurred, if they survive the shock of the operation, often live for a week or ten days; the cases are, in fact, very similar to those of obstructive suppression. For the notes of this case we are indebted to Mr. G. N. Meachen, assistant house surgeon.

A woman, aged 49 years, was admitted into Guy's Hospital on August 2nd, 1899, for pains in the lower part of the back and constipation. There was nothing noteworthy in her family history and she had had no previous illnesses. In October, 1898, she first began to suffer with pain in the lower part of the abdomen and back, and at the same time had a good deal of pain and difficulty in passing her motions, which were constipated. There had been no diarrhœa, but blood and matter had at times been observed in the evacuations. In July, 1899, her condition became worse, she had lost flesh, and had subsisted chiefly upon slops. On admission to hospital the temperature was 99° F., the pulse was 104, and the respirations were 20. A rectal examination revealed the presence of a malignant stricture the orifice of which was felt a finger's length above the anus. The lower part of the rectum was "ballooned." In the abdomen a hard mass could be felt in the left inguinal region which was partly growth and partly no doubt scybala. The patient's general condition was good.

On August 4th transverse colotomy was performed, the abdomen being opened in the middle line above the umbilicus, as it was suspected that the sigmoid and descending colon would be too firmly bound down by growth to admit of an inguinal colotomy. This supposition proved to be only too true as the mesenteric glands were enlarged in all directions. The patient took the anæsthetic (A.C.E. mixture) well. Instead of opening the bowel on the third or fourth day it was found necessary on the morning of August 6th to open it, as there were some vomiting and slight abdominal distension. These symptoms, however, quickly subsided and by the 11th she was taking fish and chicken. On the 28th she was measured for a colotomy belt and arrangements were made for her going out of the hospital. On the 31st, a day or two before her intended discharge, the sister of the ward reported that the patient had not passed urine for 18 hours, the secretion up to that time having been normal in quantity. A catheter was then passed, but no urine was withdrawn, and the bladder was not in the least distended. The pulse was normal and the patient was in no discomfort. Diuretics and plenty of fluids were ordered. The bowels were acting freely. She was evidently suffering from obstructive suppression of urine, as in her case hysterical deception was out of the question. At this time she complained of backache. On Sept. 7th a slight enlargement of the left kidney could be felt and bimanual palpation caused pain. There was no headache, optic neuritis, or retinal hæmorrhages, and the tongue was moist. The anuria was practically complete, save that the draw-sheet was on two or three occasions stained with a fluid that gave the reaction for urea. There was no œdema, the temperature varied between 96° and 97°, and the patient was sick once for the first time. On the 8th the right kidney could also be felt and a papular, erythematous rash appeared on the extensor surfaces of both forearms and around the ankles. There were no râles in the lungs and the respirations were not increased. She suffered no pain but was getting drowsy. A drachm of the tincture of jaborandi was given every six hours. On the 9th the rash had become more vivid and had spread to the trunk. She was vomiting and the drowsiness had increased. Half a pint of normal saline solution was infused subcutaneously, after which she appeared to be brighter and was more conscious. The pulse was 100, being weaker. Stimulants and a hot-pack were given, but the skin reacted little if at all. It was proposed to cut down in the left loin and drain the kidney, but all ideas of further operation were persistently refused by the patient and her friends. On the 10th paroxysms of hurried breathing were noticed for the first time. On the 14th the tongue and mouth were very dry and she was restless and tossing herself about in bed. On the 17th the tongue was dry, glazed, and covered with a brown fur, sordes appeared on the lips, and swallowing was painful and difficult. Some irregularity of the pulse was noted and a few fine râles were audible at the left base. The renal tumours were larger. On the 18th the pupils were contracted, the temperature was 95·6°, the patient was fitfully somnolent, and her breathing was typically "slow, panting, and laborious." There was another larger stain on the draw sheet during the night. On the 20th a pint of normal saline solution was again infused subcutaneously as she was quite comatose. The pulse was 72 and feeble, a mitral systolic bruit could be heard, and there was some slight œdema of the legs. In this condition she remained all day and died at 9.45 P.M. on the evening of the twenty-first day from anuria.

Necropsy.—The thoracic viscera were not examined. The right ureter was kinked just outside its entrance into the bladder by a hard gland affected with secondary growth, while for the rest of the course it was surrounded and pressed upon by numerous enlarged glands. The left ureter was pervious but was pressed upon in a similar way. Both kidneys were large, the pelves being dilated and containing some dark chocolate-coloured fluid. The cortex was pale and firm. There was a blood-clot in the left renal pelvis. The bladder was normal. The uterus and cervix were free, as had been made out during life per vaginam. The primary rectal growth was situated three inches above the anus, encircling the bowel and presenting a foul, ragged, ulcerating surface. There were no secondary deposits of

growth in any of the viscera except the mesenteric, iliac, and lumbar glands.

Remarks by Mr. DUNN.—The colon was opened on account of the pain and trouble which attended the act of defecation. I chose the transverse colon, as it seemed probable that it could be more easily delivered from the abdominal cavity than the sigmoid flexure in this case. The interior of the abdomen, too, can be more easily examined by the exploring hand and the situation is sufficiently far removed from the growth as to ensure that no direct extension from the original focus will involve the artificial anus. It is a convenient position for a temporary artificial anus when it is wished subsequently to remove the growth. The patients find little or no inconvenience from it and being situated mesially the colotomy plug can be kept in position more readily than if placed laterally, as in inguinal colotomy. In one case, subsequently to an operation of this kind, the woman became pregnant and was in due course delivered of a full-term, healthy child, the regular action of the artificial anus being in nowise interfered with. In the present case it was not until I had explored the abdomen from the median incision that the masses in the mesentery were discovered, which quite put aside all thoughts of extirpating the growth. When the suppression of urine appeared the whole of the facts were laid before the patient and her friends and they were allowed to decide as to the question of operating, since we did not feel justified in urging upon them a further operation—that of draining the pelves of the kidneys through the loins—which, although it might have prolonged life for a short period, would have rendered that existence utterly miserable.

Remarks by Mr. MEACHEN.—The question of suppression of urine, especially of the obstructive variety, is always of interest both to the pathologist in its effects upon the urinary organs and to the clinician in observing the manifold complex and varied symptoms comprehended under the term "uræmia." This case presents several instructive features in that it illustrates how lengthened a period may elapse from the commencement of an obstructive suppression both up to the time when uræmic symptoms are first developed and also before the fatal issue ensues. The case which would seem to be the record is quoted by Rayer[1] of a man, aged 64 years, in whom death took place on the twenty-fifth day from anuria. At the necropsy the right kidney was found to be atrophied and the left hypertrophied and there was a calculus impacted in the left ureter. It is noteworthy that in these cases the anuria is seldom really absolute and in this man the urine was voided on three occasions, each time being "clear, colourless, and almost devoid of saline ingredients." It is to be regretted that none could be collected for examination in the present case. Russell[2] has recorded a case of death on the twentieth day and post mortem calculi were found in both renal pelves. From the point of view of treatment it is obvious that if the seat of obstruction be known nothing short of operative interference will offer the slightest chance, but the question as to whether such operation would be justifiable for the sake of procuring temporary benefit only is one for very serious consideration.

ROYAL CORNWALL INFIRMARY, TRURO.

A CASE OF STRANGULATED COMPLETE PROLAPSE OF THE RECTUM RELEASED BY ABDOMINAL SECTION; ULTIMATE CURE OF THE CHRONIC PROLAPSE BY ANCHORING THE SIGMOID TO THE ABDOMINAL WALL (COLOPEXY).

(Under the care of Dr. F. HAROLD CARLYON.)

IT is not improbable that in the following case there was some abnormality in the length and arrangement of the meso-rectum which predisposed to prolapse, and as it had lasted for 20 months it is strange that the prolapse had never become chronic but had always been readily returnable. The chief interest in the case is, however, connected with the operation, which was performed for the permanent cure of the condition. Abdominal section in this case not only offered a means of reducing the prolapse, but afforded an opportunity for permanently preventing its recurrence. The favourable result of the laparotomy is noteworthy in so young a child, especially when it is remembered that the operation was somewhat prolonged. As Dr. Carlyon points out in his remarks, the operation has only been performed in a few cases. The first "colopexy" was apparently done by Berg who operated in all in three cases. It can only be advisable in those rare acute cases in which it is found impossible to return the prolapsed bowel by pressure from below.

On Oct. 4th, 1899, an emaciated female child, aged twenty months, was sent into the Royal Cornwall Infirmary by a medical man with the following history. Since birth the child had never had an action of the bowel without the help of an enema, prolapse of some portion of the bowel always following the very constipated stool; the mother had experienced no difficulty in returning it. On the above date a much larger amount of gut descended, and finding that she could not deal with it she sent for her family medical adviser who, finding all attempts at reduction futile, sent the child into the infirmary.

Dr. Carlyon saw the patient some four hours after the prolapse had taken place; she was suffering greatly from what appeared to be shock, possibly from the pain of repeated attempts at reduction; the child was cold, her face was blanched, the lips were livid, and the tongue was protruded. No pulse could be felt at the wrist and she showed little sign of consciousness. From time to time violent contractions of the gut within the abdomen took place plainly observable through the thin abdominal wall. The prolapsed gut was intensely congested and showed as a dark red irregular oval tumour measuring seven inches in length, and was not in the least affected by the straining. Dr. Carlyon soon convinced himself that further taxis was not only futile but dangerous, excision of so great a mass was out of the question, and seeing that the little patient was sinking rapidly he decided to open the abdomen at once. This was done with the usual precautions, an incision being made as for left inguinal colotomy. The large intestine was easily found, though the small gut gave an infinite amount of trouble due to the constant straining which the small amount of chloroform that the administrator dared to administer did little to diminish. Following the colon through the pelvis to the anal outlet the fingers came to the hard mass of protruded bowel firmly fixed. After some 15 minutes of gentle traction, combined with careful manipulation and compression from without, the whole of the gut was safely returned to the abdominal cavity. The colon was passed upwards until the sigmoid came into view, which was anchored in the following manner. Three sutures of silkworm gut were passed through the entire thickness of the abdominal wall on the one side of the incision, thence through the serous and muscular coats of the gut for an inch of its circumference, and finally through the abdominal wall on the other side; these were pulled up and tied so that a portion of the wall of the gut was pinched between the muscular walls in the incision in the hope that they would become thoroughly adherent to it; finally, the skin edges were carefully brought together, entirely concealing the gut. The wound was dressed in the ordinary way and a pad applied to the anus by a T bandage. A small enema of brandy and beef-tea was given and the child was put into a well-warmed bed. Improvement was almost immediate, consciousness returning together with a fair pulse and good colour. During the first night the child was given small quantities of milk by the hand and in the morning she clamoured for, and was given, her usual bottle of milk with a little water added; this was continued regularly at intervals of two and a half hours. Eighteen hours after the operation, and for the first time in her life, the child had a natural unassisted action of the bowel, with apparently no pain and no attempt at prolapse, and the straining diminished in violence.

All went well until the fifth day when the charge nurse on going to attend to the child found her again in a condition of collapse. Dr. Addie White, the house surgeon, was summoned and on undoing the dressings he found that most of the small and some part of the large intestine had escaped from the abdominal cavity, the stitches having torn through the thin wall on the right side of the wound; to the left side the sigmoid had become firmly attached. Dr. White, after thoroughly cleansing the bowel, returned it to the abdomen, and having freshened the edges of the wound once more brought them together with silkworm gut, further supporting the wound with long strips of plaster. No ill-effects followed the accident, the child making an uninterrupted recovery.

[1] Mal des Reins, tome iii., p. 490.
[2] Medical Times and Gazette, 1879, vol. i., p. 474.

She had a natural action of the bowel daily and no return of the prolapse. She was sent home on Oct. 29th with the wound firmly healed and considerably fatter than when she came into hospital.

Remarks by Dr. CARLYON.—On the operation of colopexy there is very little literature. I can only find mention of three cases, two in the "Medical Annual" for 1898, p. 474, as having been performed by Dr. Charles Kelsey in severe old-standing cases of procidentia, and the third in the "Annals of Surgery," 1893, p. 373. I cannot find that the operation has ever been performed for the relief of an acute case of irreducible prolapse of the rectum. Further, I am convinced that nothing short of this severe measure would have saved the child's life. In conclusion, I gratefully acknowledge my indebtedness to Dr. White for his careful after-treatment of the case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Open-air Treatment of Tuberculosis.

A MEETING of this society was held on Dec. 12th, Mr. THOMAS BRYANT, the President, being in the chair.

Dr. SIDNEY MARTIN, in continuing the discussion on the Open-air Treatment of Tuberculosis, remarked that it was an infective disease the arrest of which depended on three factors—the amount of the virus, the virulence of the bacillus, and the resistive power of the infected individual. This might be said of all infective diseases, but there were some important differences between tuberculosis and the more acute infections. In these, for example, the infective agent remained but a short time in the body, its death or the prevention of its continued growth being due in some instances to the formation of substances in the body inimical to it—substances which conferred immunity and which increased the resistive power of the organism. The slow growth of tuberculous lesions, the prolonged vitality of the tubercle bacillus in animal tissues, and the very problematical formation of antitoxic substances in the patient infected by tuberculosis were in a strong contrast to some of the acute infective diseases. Mankind must be considered relatively immune to the disease. The bacillus certainly tended to become quiescent. Another question of prime importance was the question of secondary infection. The two most important of these were the streptococcus and influenza and in children the acute infectious diseases. Some observers ascribed the high temperatures of phthisis to these secondary infections, but this view was not generally held in England. To prevent these secondary infections was one of the objects of the treatment by cleanliness of the surroundings and purity of the respired air. He would not minimise the value of drugs, though so-called "specific" treatments were futile. The "open-air" treatment had as its object the increasing of the resistance of the patient and the heightening of the immunity by increased vitality. The increase and dissemination of their knowledge of tuberculosis had done good in several ways. It had led to measures being taken for the destruction of the sputum and for the careful disposal of linen and clothes soiled by the expectoration. It had also led to the prevention of infection of the alimentary tract, as, for example, by the boiling of the milk which might be dangerous. And if the prominence occupied by the tuberculosis question had no other effects than these, good results would have been achieved. But two other facts were becoming more generally recognised—viz., that the tuberculous patient when febrile must be kept at rest like any other patient with fever and that the tuberculous patient must during treatment be kept under supervision and not be sent on long voyages or to strange countries in the haphazard way formerly practised. A pure air and life in the open air were essential in the treatment of the disease, with the objects of increasing the resistance of the patient and of preventing secondary infections. An excess of food was of advantage in many cases in order to repair the wasted tissues; but a mere increase of the fat of the body did not increase the immunity, and he considered that the excessive feeding now practised in some places was not only physiologically but practically wrong. To make a patient eat till vomiting occurred was of no advantage whatever in treatment; to continue excessive feeding while there was functional derangement of digestion was also of disadvantage. Judicious feeding, but not necessarily over-feeding, was the line to work upon. A third element in the treatment was a change of life with a change of locality. This not infrequently acted as the turning-point towards recovery in a case of tuberculosis. Whether this treatment could be carried out among the poor was a question, but he (Dr. Martin) did not agree with the treatment of the better class of patients in sanatoria. All the elements necessary could be fulfilled at home.

Dr. J. E. POLLOCK thought it might be profitable to compare the present with times past. In 1838 the mortality from phthisis was 38 per 1000 of persons living. In 1892 it was 14 per 1000. What were the causes of this decline? The health of the whole population had improved. Some diseases had been extinguished. This change had been brought about, not by any special medical treatment, but by the general causes of better sanitation, such as subsoil drainage, increased comfort, better dwellings, dress, and food of the whole population. But the question was, What had they, as a profession, done in the way of treatment? He believed that the results achieved at the Brompton Hospital for Consumption would compare favourably with those of the various sanatoria in this and other countries. At that hospital they divided the cases into stages of the disease—first stage with signs only of consolidation, second stage with softening, and third stage with cavitation—so that it was a little difficult to compare these with the figures given at various sanatoria. But he quoted statistics from Sir Herman Weber, Dettweiler, and Brehmer which would show, he believed, that the results achieved were very similar. The principles adopted at the Brompton Hospital had for years been similar to those now advocated and employed at the various sanatoria. They had a large, airy, well-ventilated building, the ventilation being carried on by means of extraction, and pure air was admitted heated by passing over pipes. The temperature was kept at from 60° to 63° F. day and night, summer and winter. The patients were encouraged to go out into the grounds. The diet was liberal, but the patients were not crammed. The great majority had a moderate amount of stimulants of some kind. No attempt was made at specific treatment—only general treatment, which aimed at improving the general health. As regards remedial treatment there was no known specific—nothing which went direct to the bacillus and destroyed it. The only means they had were directed to increase the vitality and the resistance of the individual. The treatment by open air was certainly not a new one. In 1865 he had published the following statement: "By experiment it will be found that the greatest amount of relief to a patient suffering from tubercle in the lung is obtainable by free exposure, with the surface well protected, to a dry, pure, still open air, even when of a low temperature." He thought there were objections to sanatoria, and one of these was a danger of hypermedication. They got very good results without sending the patient to any institution.

Dr. F. G. D. DREWITT said there were two points he wished to refer to. They had not recognised the difference between living in the open air and living in a draught. Fresh air could be got without taking out the windows. The question of adequate ventilation without draught was one of the most important connected with that subject. His other point related to food. What should it consist of for enforced feeding? If a person put on too much weight it was probably fat and this by no means indicated that his resisting power was greater. He referred to the fact, revealed by Mr. Bland Sutton's researches at the Zoological Gardens, that graminivorous birds died in large numbers from tuberculosis, but the meat-eating and fish-eating birds died much less frequently from that disease. Woods-Hutchinson's researches revealed the same thing. Carnivora and birds of prey hardly ever died from tubercle. Caged animals of all kinds died from tubercle and so did human beings confined to narrow dwellings. These and other facts led him to the conclusion that consumptives ought not to have an excess of starches and sugars but a liberal supply of meat.

Dr. J. W. WASHBOURN said that no one who had listened to this discussion could doubt the value of the so-called open-air treatment of phthisis. He agreed with the majority of the speakers in considering fresh air to be only one of several factors concerned in producing the beneficial results which

followed the treatment. In addition to fresh air, a suitable diet, properly regulated exercise, and freedom from mental anxieties were important factors. He considered medical supervision essential, as different cases required different treatment. A patient with a high temperature, for instance, required rest, and a diet which suited one patient would not always suit another. He thought that in many instances patients were overfed and he did not think that a gain in weight necessarily connoted improvement in health. The question in which he was most interested was the manner by which the treatment acted. Phthisis in its early stage was a simple tuberculosis of the lung—an inflammatory condition set up by the presence of the tubercle bacillus. The natural modes of defence of the body were sufficient in the majority of cases to cope with the tubercle bacillus provided the latter was not assisted by other micro-organisms. Impure air contained other bacteria which when inhaled invaded those portions of the lung which were already weakened by the tubercle bacillus. The most important of these bacteria were, he thought, pneumococci and streptococci, and it was in such secondary invasions that the chief danger of phthisis lay. Fresh air which contained few bacteria was of value in diminishing this danger. An analogous condition was met with in scarlet fever where a secondary invasion of the throat with streptococci was the most frequent cause of death. It was well known that overcrowding in the ward of a fever hospital with consequent inhalation of impure air considerably increased this danger.

Dr. F. R. WALTERS referred to the medical supervision of patients undergoing hygienic treatment and advocated more or less continuous supervision. The hygienic treatment of phthisis called for at least as much judgment and attention as the medical treatment of any other serious disease. It should be progressive and educational and should be modified according to the state and personal peculiarities of each patient and the locality and climate in which it was carried out. Of two apparently similar cases one might benefit by an amount of exercise or a degree of cold which would do mischief to the other. Nor could it be foretold with certainty how soon the treatment would require modification unless the patient were watched. The average consumptive was an untrustworthy guide to the details of his own treatment. In choosing a sanatorium preference should be given to one in charge of a competent resident physician. Treatment should be according to common sense, not according to red tape rules. To leave phthisical patients in wet clothes was unwise. Patients with catarrhal complications appeared to require a warmer temperature. In exposed situations more extensive artificial shelters were required. The best type of sanatorium building was not always the same everywhere. Much depended on the local configuration of the land. Dr. Walters considered that most of the urban chest hospitals were unsuited to the hygienic treatment and said that their true function was to give "first-aid" to consumptives. All such hospitals should be connected with country sanatoria where poor patients could remain for the greater part of a twelvemonth and then settle permanently in the country.

Dr. PARKES WEBER wished to refer to the kind of diet best suited to the treatment of these cases. He quite agreed with Dr. F. G. D. Drewitt in the value of proteids as compared with farinaceous foods, but on different grounds. He made reference to the fact that men who had a tendency to gout were resistent to tubercle and this might possibly be explained by their tendency to take excessive nitrogenous food. Among the rich who could afford excessive meat phthisis was rare, but it was common among the poor who could not afford it. He also referred to an experiment which had been performed. A certain number of dogs were infected with tubercle and then some of them were fed on flesh diet, while others were fed on mixed and farinaceous food. It was found that the former were slow to develop the disease, but that the latter died off very quickly.

Mr. W. SPENCER WATSON wished to refer to the question of climate and geographical position. He quite agreed with the opener of the discussion in the importance of this aspect of the question. The advantage of ocean voyages was not to be forgotten and he referred to two or three cases in point. Why should not marine sanatoria be equipped? That was an ideal of the future. One advantage which would accrue from the open-air treatment and the way it had been taken up by the public was to impress upon people in general the value of pure air as a preventive of phthisis and other diseases. The inhabitants of London tolerated a highly polluted atmosphere which was dangerous to health because their olfactory organs were blunted and demoralised, and it was time that such a state of matters ceased.

Mr. PEARCE GOULD remarked that but little had been said about tubercle elsewhere than in the lungs. Surgeons had for a long time laid great stress on fresh air in the treatment of tubercle of the joints, glands, testicle, and bones, as might have been seen at Margate for many years. He thought that surgical tubercle could be treated at the patients' own homes, even in London, quite well. Institutions offered no attraction to the surgeon. As to the length of time necessary it must be prolonged long past the date when all physical signs had gone; it was a matter not of weeks or months but often years. The social position of the patient was very often the leading factor in the prognosis of surgical tubercle.

The PRESIDENT also referred to the value of the open-air method of treatment in surgical cases. He had long been in the habit of advocating what he called the constant fresh-air bath. He referred to several cases in illustration. One was a case of tuberculous arthritis which threatened to disorganise. Under this treatment the temperature came down to normal in a week. The patient made steady improvement but relapsed. At a consultation amputation was recommended, but the joint was scraped and the patient placed under treatment by open air and then he made a complete recovery. Another case was that of a man, aged 42 years, who had very extensive spinal disease. Under treatment by rest and constant fresh air he improved so that an operation could be done. He was convalescent in six months and ultimately made a good recovery. He remained well for 10 years, but two years ago he developed tuberculous epididymitis. He (Mr. Bryant) advised him to live on a yacht for six months and the nodules almost entirely disappeared. In July, 1889, he was consulted by a woman, aged 22 years, on account of disease of the knee for five years with extensive suppuration. An operation was performed on July 10th. Under open-air treatment she made a very perfect recovery and she had since continued the same line of treatment. He also referred in detail to several other cases as illustrating what he regarded as one of the greatest principles in the treatment of tuberculous disease.

Dr. KINGSTON FOWLER, in summing up and replying, remarked that the length of the discussion had shown how great was the interest which the subject excited. He had few criticisms to which to reply, but desired to deal with some points omitted from his paper owing to its length. His (Dr. Fowler's) statement as to the relative importance of the "system" and the "man" had been misunderstood, probably owing to his having omitted to read the following sentence: "It really appears to be thought in some quarters that it is only once or twice in a century that a man will be found who has the necessary gifts." He adhered to his original statement, that "given the right method there will be no lack of men who are capable of putting it into practice provided they have been properly trained." He did not in the least under-estimate the importance of the personality of the resident physician. Sir Hermann Weber had spoken of the necessity for a careful study of each individual case; with this he entirely agreed. Indeed, "individualisation of treatment" was the very term preferred by the chief exponent of the method. As to the mode of action of the treatment it was difficult to make positive statements. He thought that an open-air life, abundance of food, and regulated exercise acted upon a patient with pulmonary tuberculosis in the same manner as upon a healthy individual—viz., by improving the quality of the blood, increasing the functional activity of all the organs, and so increasing vital energy and resisting power; and to this rather than to any aseptic action on the lungs he was disposed to attribute the favourable results observed. Several speakers had referred to the important share which in their opinion organisms other than the bacillus of Koch take in the production of the destructive lesions in the lungs. That such organisms were present he was well aware, but he considered that the belief in their importance rested upon no solid pathological basis. The action of septic organisms was

to produce septicæmia and of this he could see no evidence in the vast majority of cases of pulmonary tuberculosis. Dr. Heron had repeated a statement, first made, the speaker believed, by Koch, that in cases in which the temperature reached 100·4° F. septic processes were in part responsible for the pyrexia. That the temperature phenomena did not indicate the action of septic organisms could be observed in cases of serous membrane tuberculosis—e.g., of the pleura even when repeated examination of the fluid withdrawn from the chest showed the absence of such organisms. As to the details of the method few speakers had supported his advocacy of the rectal temperature as a more certain guide to the activity of the disease than that of the mouth. The statement that there was any certain relation between the rectal and mouth temperatures was disproved by repeated observations. He showed a temperature chart from a case under sanatorium treatment in which, up to a certain date, it had not been thought necessary to obtain the rectal temperature, and the patient, in the belief that it was an apyrexial case, had been allowed to take active exercise, the result being that he made little or no progress. Immediately the rectal temperature was observed it became obvious that the patient ought to have been in bed. He ridiculed the idea that to take the temperature in the rectum was to submit the patient to an indignity; if so, it was no greater than that undergone by any patient treated by the ordinary method in use in cases of gastric ulcer. Dr. Clifford Allbutt had drawn a gloomy picture of some sanatoria in which the patients were not allowed to read novels or newspapers and had about them so few of the amenities of life that they lapsed into a condition of imbecility. If this referred to Nordrach a visit there would soon dispel the delusion. He was not in favour of draughts, but where the open-air part of the method was thoroughly carried out such a degree of "air-hunger" was induced in the patients that it was difficult to get them to avoid draughts. It rendered them for a time almost unfit for ordinary civilised life. This was a very different condition from that described by Dr. Allbutt, in which the patients were by prolonged exposure to cold rendered insensible to it. This condition could be observed in many of the German sanatoria in which patients were sent to lie in Liegehalle for hours instead of taking exercise and sometimes became almost blue in the face, and when they were indoors had all the windows of the dining-rooms and bedrooms closed. The open-air life must be continuous throughout the whole 24 hours and not intermittent. Dr. Pruen had referred to the difficulty in getting a certain proportion of the patients to take the quantity of food ordered. As stated in his paper Dr. Fowler believed this to be the point where the importance of the system adopted and the individuality of the physician in charge were most obvious. A case was related showing how such a patient might be dealt with. Patients who were making an honest effort should be encouraged and those who were not should be dismissed, as in his experience they rarely benefited by the treatment. Dr. Clifford Allbutt had discussed the question as to what constituted "cure" of the disease. In Dr. Fowler's opinion the term should never be used, or at any rate only after ascertaining what would be the meaning attached to it by the patient. This word and the term "patch" were responsible for many failures in treatment. Dr. Allbutt thought that no case should be considered as "cured" until he had "been at his old work amid the old conditions for a twelvemonth without a recurrence." Dr. Fowler sincerely hoped that no patient would regard this as a piece of advice, for it was precisely what he should if possible avoid. This was unfortunately in many cases impossible, but the patient must return at his own risk and not under the impression that, except in very rare cases, it was advisable. In cases which had undergone arrest it was not uncommon to be told that "all physical signs disappeared." This was seldom true unless it referred only to the adventitious sounds. These were, as a rule, absent from an arrested lesion, although when emphysematous changes had taken place around a fibroid lesion a few bubbling râles might remain. He had been requested by one of the officers of the society to make some reference to what had been done at the Brompton Hospital in regard to the adoption of this method of treatment. In doing so he gave only his own views, which might not be in agreement with those of his colleagues. Six wards containing 28 beds were set apart for cases proved to be suffering from pulmonary tuberculosis, and in these wards the ordinary method of ventilation in use in the hospital was replaced by open windows. These patients had three very substantial meals daily. When the scheme was started it was the intention to admit to these wards only such cases as required, owing to the activity of the disease, to be kept in bed, and it was hoped that, pending the construction of a permanent sanatorium, a temporary sanatorium would be obtained in the country to receive them by such time as it became desirable that they should be up and taking exercise. Unfortunately, this hope had not been fulfilled, for reasons into which it was unnecessary to enter, and a certain number had been up and had had to take their exercise in the grounds of the hospital. The open-window part of the treatment had certainly been carried out very thoroughly, but with one doubtful exception he had not heard that any patient had caught cold. He was there on Friday, Dec. 8th, when the external temperature was very low and the wind cold, and he ordered some of the windows to be closed. The sister in charge informed him that she had already done so, but the patients asked to have them re-opened. This illustrated the "air-hunger" already referred to which the method induces. During the prevalence of fog he had been assured by the resident officers and sisters that the patients in these wards (the windows were not closed) suffered less inconvenience from it than those in the rest of the hospital. As to whether cases thus treated at the Brompton Hospital for Consumption made greater progress towards recovery than they would have made under the ordinary conditions as to diet and ventilation prevailing there he did not intend to make any statement. A longer time and a larger experience were necessary before any conclusion could be formed. Professor Boyce's observations on the construction of sanatoria were interesting, but he was not sure that Professor Boyce realised that the best possible results might be obtained in a building which fell far short of his ideal, and results of no value whatever in a building which completely fulfilled it. He preferred the single-storeyed building which Dr. Poore has described with a detached dining hall. The great difficulty lay in getting medical men and patients to realise the length of time required to obtain an obsolete condition of the lesions. This would be still greater in applying the sanatorium method to the treatment of the poor. Only the unmarried of both sexes who had no relatives dependent upon them for support would be able or willing to devote a sufficient time to the recovery of health. He had no fear as to the result in this country provided that the system was honestly carried out for the benefit of the patient and not primarily for commercial purposes, but the history of the past showed that this element was certain to appear. Still, if, like politicians, they were only able to obtain the second best results, even these would be better than those to which they had hitherto been accustomed.

MEDICAL SOCIETY OF LONDON.

The Surgical Treatment of Ascites.—Fifty Successful Consecutive Cases of Ovariotomy.

A MEETING of this society was held on Dec. 11th, Dr. F. T. ROBERTS, the President, being in the chair.

Dr. H. D. ROLLESTON and Mr. G. R. TURNER communicated a paper on the Surgical Treatment of the Ascites of Cirrhosis by the Artificial Production of Peritoneal Adhesions which is published in our present issue (p. 1660).—Dr. PARKES WEBER referred to a case of cirrhotic ascites which was treated by ordinary tapping and the ascites disappeared. He thought the question might fairly be asked if any, and if so what, conditions ought not to be treated by the method suggested by Dr. Rolleston and Mr. Turner—e.g., should very advanced cases be so treated? He thought also that if the specific gravity of the fluid were found to be high that was a reason for supposing that the condition was rather more inflammatory than usual. In such cases as these, where the specific gravity was, for instance, over 1020, tapping once or twice might result in cure without further operative treatment. — Dr. FREDERICK J. SMITH wished to raise the question, Were they ever justified in doing paracentesis abdominis by the old-fashioned brutal method? There might be adhesions or displacements and no one could tell where he was going to with the trocar. Might not a scientific laparotomy be substituted with advantage for the older method? He referred to two cases operated on for the relief of cirrhotic ascites in which the fluid was very blood-stained. The ascites had

come on rapidly in both cases. One died within three days but the other recovered. What was the meaning of this blood-stained fluid? Would it prevent the procedures being accomplished which Dr. Rolleston and Mr. Turner suggested? As regards the treatment of cirrhosis in general, in his opinion, when ascites supervened the patient's days were numbered. He would rather prefer, therefore, the simplest operative treatment possible.—Mr. L. A. BIDWELL referred to two cases of cirrhotic ascites treated by operation, both unsuccessful. The first had been tapped eight times previously and the second three times. He had in the operation simply rubbed the liver with antiseptic gauze. As regards the incision he preferred that recommended by Mr. Turner, but he would not place any omentum between the liver and the diaphragm.—Mr. F. C. WALLIS referred to the case of a woman, the subject of cirrhotic ascites, whose abdomen was enormously distended with fluid. The abdomen was tapped in the usual way with a trocar after the abdominal wall had been incised down to the peritoneum. 22 pints of fluid were drawn off. She was tapped four times subsequently and 16 pints, 12 pints, 11 pints, and eight pints were drawn off on successive occasions, but from the last time onwards she made a slow but complete recovery. The last tapping was done four and a half years ago and now she was quite well and earning her living.—Dr. PARKES WEBER remarked that hæmorrhagic effusions come under the head of inflammatory products. It would point to the fluid probably having a partially inflammatory origin. He thought possibly cure might result from a single tapping, as in the other cases he had referred to. In THE LANCET of Nov. 11th, 1899, Dr. G. S. Middleton had published a case of hæmorrhagic ascites which had recovered after paracentesis, and a study of the account of this case had led him to think it was probably connected with hepatic cirrhosis. He attached great importance to the use of a thin trocar and he felt convinced that a fatal result might ensue from the use of too thick an instrument.—Dr. WILLIAM EWART remarked that what they really wanted was a diagnostic method by means of which it could be decided whether they were dealing with cirrhosis or not. It was often very difficult to decide what was really the origin of the fluid. He referred to a case under his care which was operated on by Mr. Warrington Haward in a manner similar to that adopted by Mr. Turner. The liver was sutured. The patient had been tapped 50 times altogether, but died in the end. In this case the liver was sound, but it was universally adherent to all the surrounding organs, to the diaphragm, and the abdominal wall. The primary disease was really a very obscure form of heart disease. The heart was enclosed within a rigid adherent pericardium and the ascites was a consequence of this. He also referred to another case which had been operated on and this was really a case of ascites. The incision was made in the middle line. The liver was not sutured to the abdominal wall. After death the liver was found to be hardly adherent to the abdominal wall at all. There had been no counter opening made and this had prevented the parts from being kept in apposition. In this case the peritoneum was irrigated with a strong solution of iodine. He wished there was a method of deciding by the nature of the fluid, or in some other way, whether the case was really one of cirrhosis or not.—Mr. TURNER, in replying, maintained that the best incision was one parallel to the ribs; it gave much better access to the liver. It was very necessary to suture the liver to the abdominal parietes, and it was much better to include the omentum. In a case which he had operated on for gallstones he had found extremely vascular adhesions between the omentum and the liver and it seemed to him that these omental vessels must be of the greatest use in establishing the collateral circulation. Some surgeons had taken exception, but he firmly believed in the preparation of the patient by paracentesis on the morning of the operation. He had never seen any evil effect from the use of an ordinary trocar and cannula, and it was distinctly advantageous, especially when the collection of fluid was considerable. It could be done without an anæsthetic and it saved a very large amount of time at the operation.—The PRESIDENT remarked that he could not agree with all that had been said in the opening paper. He had long taken an interest in this subject and more than 30 years ago he had published in the *Liverpool Medical Journal* cases bearing on the efficacy of repeated tappings in the treatment of ascites. He could not at all agree that ascites added so greatly to the gravity of the prognosis of cirrhosis and that the patient's days were necessarily numbered when ascites appeared. He had seen a large number of cases of undoubted cirrhosis of the liver which had completely recovered after ordinary tapping. The operation suggested might, perhaps, offer the patient additional chances under certain circumstances. But he thought they ought to consider and define those circumstances most carefully before deciding on an operation of this kind.—Dr. ROLLESTON, in replying, admitted that cases of ascites did sometimes recover after ordinary paracentesis but as a general rule they did not recover. These formed the majority. He thought that many of those cases of supposed recovery from ascites might be syphilis or chronic peritonitis. Ascitic fluid was essentially non-inflammatory in origin and he doubted whether it was often attended by inflammation of the peritoneum. As regards the hæmorrhage into the fluid which had been mentioned, he believed it was generally due to previous tappings, it was due to traumatism.

Mr. JOHN D. MALCOLM made a communication based on 50 Successful Consecutive Cases of Ovariotomy recorded three years after the operation. After remarking that the different methods of selecting cases for operation and of arranging them for publication rendered the results of comparisons of the statistics of various operators very doubtfully useful, he proceeded to give an account of the patients three years after the last operation of the series. He had failed to trace seven. 29 were in very nearly perfect health. Seven others had little to complain of. In four the condition of health was unsatisfactory and three were dead. Special attention was devoted to the difficulties, accidents, and mistakes which had occurred, and to those cases in which the later results were unsatisfactory. In conclusion, it was urged that early operations should be performed in cases of ovarian tumour whenever that was possible; and, above all, that the reason for delay should never be that the patient was quite well. That was especially put forward in the interests of those patients who might recover well from the operation. Mr. Malcolm added a short account of his unpublished fatal cases of ovariotomy and showed that in most of them the fatal issue could be directly attributed to delay in operating.

CLINICAL SOCIETY OF LONDON.

Cases of Perforated Gastric Ulcer treated by Operation.—A case of Arrested Development of the Speech Centre.

A MEETING of this society was held on Dec. 8th, Sir R. DOUGLAS POWELL, the President, being in the chair.

Mr. ARTHUR BARKER made a communication based on 12 consecutive cases of Perforated Gastric Ulcer on which he had operated during the last few years. They were all treated as nearly as possible under the same conditions and for this reason offered an opportunity of contrast with other series in which the procedure was undertaken on different lines. The immediate results were that five out of 12 were saved. Two of the fatal cases lived for 15 and 14 days respectively, the first dying from subphrenic abscess and consequent pleuro-pneumonia, the second from bleeding into the stomach from the ulcer, the conditions following the operation being otherwise singularly favourable. The first of these two cases suggested an improvement in technique which favourably affected the subsequent cases. The second case suggested the propriety of excision of the ulcer in certain cases as the only means of preventing subsequent hæmorrhage from it. But in none of the other cases was the ulcer excised and in none was there any secondary bleeding. In all the 12 cases mopping out of the abdominal cavity was preferred to flushing, Mr. Barker's previous experience having satisfied him that the latter practice was undesirable in these cases. Thorough sponging beneath the diaphragm was important. Drainage was only employed in one case and was then shown to have been unnecessary. In none of the other cases would it have improved the patient's chances. A vertical incision was made in all of the cases which was enlarged laterally in one. Sutures of hard silk were used. The condition of the peritoneum was an important matter. Free gas was almost always present in the abdominal cavity. 10 of the cases were females, mostly in domestic service, and two were males. Both the males

died; one — in whom considerable induration existed around the ulcer raising the question of removal — died from hæmorrhage from the ulcer. He made a good recovery from the operation, but on the tenth day commenced to vomit blood and died on the fourteenth. The other male patient, who could not be operated on until 72 hours had elapsed, died from peritonitis. A remarkable fact which had been elicited by the study of these and other cases was how frequently gastric ulcer might exist without any definite symptoms. Several of these cases had complained of nothing more than a vague dyspepsia. In only three was there a previous history of vomiting and in only two was there definite hæmatemesis. One patient, who had been under Mr. Barker's close observation for several months, had complained of absolutely no symptoms until the moment when the perforation took place. Recognition of the disease was of importance as bearing on the early recognition of the accident of perforation. Nothing seemed to affect the issue of the case more than the time which intervened between the perforation and the operation. The average length of time in the five successful cases was 11¾ hours (the shortest 6½ hours and the longest 18 hours); that in the seven fatal cases 30½ hours (the shortest 28 hours and the longest 77 hours). The early diagnosis of the perforation, therefore, became a matter of vital importance. The symptoms of the accident varied somewhat. Epigastric pain was common to all, but it varied both in character and degree. Strange to say, collapse was absent in six out of the 12 cases. The presence and the degree of shock seemed to depend rather on the amount and character of fluid extravasated into the peritoneum. The absence of the normal liver dulness had been regarded by some observers as a pathognomonic sign, but Mr. Barker could not endorse this. Its existence in six of his cases seemed to depend on the quantity and position of the gas in the abdominal cavity. In one of his cases the liver dulness was absolutely normal—a fact which was verified by several competent observers. On the other hand, if the dulness was absent it helped, with other signs, in the recognition of the accident. Finally, a note as to the remote result in the five successful cases was added. From this it appeared that all were well for a considerable period (amounting to years in some cases) after the operation. Only one case had a threatening of a second perforation which was happily met by rest in bed and careful dieting, the patient being now quite well three years after operation.—Mr. WARRINGTON HAWARD commented upon Mr. Barker's statement that many of these cases occurred in apparently healthy people with few, if any, symptoms, a class which he confessed had not come under his (the speaker's) personal observation. He regarded the extreme anæmia as very typical of such cases, and they were nearly always domestic servants. He did not think the character of the extravasated material had had as much bearing on the future of the cases he had met with as the time that had elapsed before operation. He thought that subphrenic abscess was especially apt to occur when the ulcer had leaked a little, though not to such an extent as to cause generalised peritonitis. A greater danger, especially with ulcer on the front of the stomach, was basal pleurisy. He was pleased that Mr. Barker preferred "sponging" to flushing the abdomen, for he himself held that though flushing might be necessary in cases of some standing with extensive extravasation "sponging" was generally sufficient. It was generally only necessary to cleanse a limited extent of the peritoneum, especially in those cases operated on promptly, and flushing carried septic matter to remote parts. One must not always hesitate to operate on account of the collapse. Letting out of the gas often gave this condition great relief.—Mr. F. C. WALLIS referred to a male case which he had seen upwards of 24 hours after the onset of symptoms in which there were marked peritonitis and a great deal of gas in the peritoneum. Careful search failed to find any perforation, but there was some induration. He opened the stomach and in its lower part found two obvious ulcerous patches and in one a very tiny perforation. At the post-mortem examination both the ulcers held water very well. He suggested that such cases emphasised the necessity of making very careful search before abandoning the idea that perforation had occurred.—Mr. A. A. BOWLBY, referring to the localisation of the pain, remarked that perforating gastric ulcer might be overlooked if they always expected pain in the gastric region. He mentioned two cases recently seen by him; in one case it was just above the pubes and in the other it was in the lumbar region. In many of these cases it was limited to the lower abdomen. He quite agreed about the uncertainty of the absence of liver dulness. It might be absent where there was no perforation and he instanced a case of intestinal obstruction with considerable distension in which it was completely obscured. The duration of time between perforation and operation for relief was not, he thought, of so much importance. He had operated in three hours' time and failed. The size of the perforation and what came out of it were in his belief the chief factors, and he mentioned two cases in proof of this.—Mr. L. A. DUNN said that he had operated upon six cases of perforated gastric ulcer and one duodenal ulcer; the last was a man, and of the others four were men and two were women. Two men recovered and one woman. In one case he had to operate again a week ago for intestinal obstruction. He referred to a case in which there was loss of liver dulness, but on operating, though the peritoneum was full of gas, there was no fluid and the most careful examination of the stomach did not reveal any perforation. He thought special attention should be directed to the pelvis. In one case unless he had enlarged the opening and washed out the pelvis the patient would certainly have died. He thought flushing the abdominal cavity was much preferable to the use of the sponge.—Mr. C. S. WALLACE also thought flushing the abdomen was a much more satisfactory measure than mopping, but to be efficacious the incision must be large and the intestines should be allowed to float out of the body. He concurred in the view that loss of liver dulness was an unreliable sign, but he thought that the time which elapsed before operation was not much criterion, as in a case which he mentioned. The chief point was whether the peritonitis was local or generalised, and this much depended on what was done by the patient after the perforation. Many perforations took place while walking about and the fluid gravitated into the pelvis, and he agreed with the last speaker in the importance of the pelvis.—Mr. F. EVE urged that in these cases they must not wait for particular symptoms. In respect of pain he alluded to the case of a young woman who had had symptoms of ulcerated stomach and was one morning seized with the typical symptoms of perforation. A quarter of a grain of morphia was administered and when he saw her several hours later there was no pain or tenderness in the epigastrium, the only symptom being slight rigidity of the recti and a rise of temperature. Post mortem, on examining the posterior surface of the stomach he found a pinhole perforation. He also referred to two other cases of young women with gastric ulcer. One of them was suddenly seized with collapse, pain, retching, and tenderness over the epigastrium, yet the stomach was found to be perfectly healthy. The symptoms were due to pneumonia, from which she died. With regard to liver dulness he agreed that it was an absolutely futile sign—it might be due to a distended colon—and referred to the case of a young man who had received a blow on the abdomen in whom liver dulness was absent, but on operation nothing was found. As to whether flushing or mopping was most suitable, in recent cases with limited peritonitis mopping was best, but in later and generalised cases most surgeons would recommend flushing.—Mr. L. A. BIDWELL had collected 55 cases of perforation, in 33 of which the time which elapsed before operation was mentioned. One-third of the recoveries had been operated on within six hours and five others within 12 hours. All the cases which were operated on within 12 hours were successful and half of those operated on between 12 and 24 hours. Mr. Comte had collected notes of 65 cases with 19 recoveries, 11 of these having been operated on within the first 10 hours. With regard to flushing and mopping that must depend upon the case. In one case he had operated within two hours and in another within 18 hours, the pelvis being full of stomach contents in both. He did not see how it would be possible to remove that simply by sponging.—Mr. BRUCE CLARKE agreed that liver dulness *per se* was a symptom of doubtful value, but in no disease would they rely on any one sign or symptom. He referred to a case where liver dulness was almost absent from extreme distension. The pain might be almost anywhere, or indeed absent, of which he mentioned an instance. He pointed out that as a general rule the further down the intestinal tract was the perforation the less fatal it was, or at any rate the less acute were the symptoms. Something also must be allowed for the kind of fluid that was

extravasated. He agreed with washing out the abdomen, turning out the intestines, and washing out the pelvis, but he admitted that this was not necessary in all cases. He related a case in which he was unable to suture a perforation on the under surface of the stomach, so he simply washed out the cavity and put in a drainage tube with complete success. In some cases he would put in more than one drainage tube.—Mr. JAMES BERRY preferred mopping to washing out. He had seen about 12 cases of perforated gastric ulcer and he had not seen a case recover after washing out, while, on the other hand, the majority of cases treated by mopping recovered.—Mr. BARKER, in reply, speaking in relation to the previously healthy condition of some of these patients, said he had known one of them for some months before the operation and a more wholesome and healthy-looking young woman he had never seen. She had told him that she had had no symptoms beyond slight indigestion. It was certainly very important to get these cases early, but it was the character and the amount of the fluid quite as much as the time that determined the result. In three of his cases there was evidence of irritation of the pleura, in one decided subphrenic abscess, and in two symptoms of subphrenic abscess; in one of these there was serum in the pleura and in the other not, but there was pleurisy. He himself had been greatly addicted to washing out in years gone by but had been gradually weaned from it. Even when the extravasation had reached the pelvis it could be removed by mopping. In conclusion he spoke highly of the value of saline solution as an infusion into the areolar tissue as a remedy for the collapse.

Dr. ARTHUR VOELCKER narrated a case of Arrested Development of the Speech Centre occurring in a girl, aged seven and a half years, who was unable to speak. The child was the elder of two children, her brother being healthy. The father's sister had a child, aged 11 years, who was said to be similarly affected. There was no family history of insanity, epilepsy, alcoholism, syphilis, or rheumatism. The previous history of the child was that she was quite well till six months of age, when she had a series of general convulsions ascribed to dentition. These fits recurred occasionally up to the age of three years, when they disappeared. She walked at 12 months, but had never spoken. At one year she had a severe fall on her forehead, followed by suppuration but no discharge of bone. At four years she had measles. She had never been violent, passionate, or emotional, and had been clean in her habits, though she occasionally soiled her clothes. Though unable to speak she appeared quite bright and intelligent and heard well. On admission her present state showed her to be rather small but well formed. The maximum head circumference was 19 75 inches. The forehead was scarred in the centre but no depressed bone was felt. The palate was high and rather narrow. Motion and sensation were natural and there was no muscular wasting. The superficial and deep reflexes were natural. Coördination was good. There was no tremor of the limbs. The child was rather left-handed. She was intelligent, understood what was said to her, and did what she was told to do readily. Her hearing was normal. Spontaneous speech was limited to a few monosyllabic utterances, chiefly "Eh." Imitative speech included "Eh," "Bee," "Bye," "Baa," "Gee," "Tick," and she repeated sounds with a numerical, though not a phonetic, accuracy; thus her repetitions included the same number of syllables as the word she attempted to repeat. The ticking of a watch did not evoke a rhythmic response. She could sing, but no recognisable tune, nor did she sing scales in unison with the piano. There was no attempt to continue the serial production of sounds, as in counting, saying the alphabet, &c. "Yes" and "no" were sometimes accompanied by their usual affirmative and negative head gestures. The sight was natural. She could not recognise printed or written words, numerals, or letters, but readily recognised pictures of objects and objects themselves. She had no recognisable appreciation of colour, but distinguished large from small objects. She was unable to write letters, words, or numerals, or to copy them. She could, however, copy straight lines and circles with either hand, preferably with the left, but could not make a cross. When writing with the left hand she frequently made her marks from right to left. The case, he observed, was interesting from the fact that it differed from the cases of deaf-mutism and from cases of aphasia occurring in mentally deficient children, and from those in whom aphasia developed after the power of speech had been acquired. Dr. Bastian had pointed out in the development of the power of speech that the first stage consisted in learning to associate particular sounds with particular mental impressions, and this stage had evidently been reached by the child, but the second stage, in which the power of articulating the sounds which had been used as mental symbols were acquired, had not yet been reached by the child. Accepting the existence of a visual and an auditory perceptive centre and a glosso-kinæsthetic and cheiro-kinæsthetic centre as maintained by Dr. Bastian, it appeared that the two former centres were intact but that the two latter or their commissural connexions with the first two centres were involved. The observation that the child often wrote from right to left was explicable if it was remembered that movements in the right hand of supination resulted in a clockwise movement of the thumb, while in the left hand supination resulted in a counter clockwise movement, and that in movements simultaneously performed in the two upper limbs it was easier to excite corresponding muscles than to make the movements of one side maintain a parallelism with those of the other. Thus it was easier to simultaneously describe two circles with the fingers of the right and left hand respectively, one clockwise and the other counter clockwise—a fact which was also confirmed by the results of an attempt to describe a circle with each hand rapidly while trying to maintain a parallelism of the two hands. This would tend to show that in mirror writing they had in the left hand represented the movements of the right, and that such movements were the result of kinæsthetic and not visual impressions, and also that it was probable that the centre for writing was, as Elder maintained, in the left hemisphere. The absence of any training in writing made it impossible to determine the extent to which the cheiro-kinæsthetic centre itself was involved, and the same held good with regard to speech and the glosso-kinæsthetic centre. The disease must affect the region of the posterior parts of the second and third left frontal convolutions and was probably not a gross lesion but due to arrested or inhibited development of function of the glosso- and cheiro-kinæsthetic centres or their connexions with the auditory and visual preceptive centres. The prognosis was favourable and the treatment recommended was instruction in writing and in the lip language.—In reply to the PRESIDENT Dr. VOELCKER said he thought they must look to the convulsions as having in some way damaged the region referred to, though the lesion might not be discoverable by the microscope or by the naked eye.

OBSTETRICAL SOCIETY OF LONDON.

Tubal Molar Pregnancy.—Idiopathic Peritonitis.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 6th, Mr. ALBAN DORAN, the President, being in the chair.

Dr. JOHN PHILLIPS read notes of a case of Tubal Molar Pregnancy Complicated by a Suppurating Ovarian Cyst on the Opposite Side. The patient was 40 years of age and had had 10 children after natural labours. On August 5th, 1898, she had pain in the left iliac fossa; menstruation had been absent since May. A lump was found in the left and posterior quarter of the pelvis. On August 26th she had a sudden attack of pain and collapse with vaginal hæmorrhage which continued. On Sept. 26th the patient was anæmic and had a temperature of 100° F. and a pulse of 103. A fixed bilobed swelling occupied the whole of the lower abdomen. At the operation on Oct. 17th, 1898, the left part of the tumour was found to be an extra-uterine sac with putrid contents and with a fœtus three inches long projecting through the wall; the right part was a suppurating ovarian cyst. After removal of the sac and the cyst the peritoneum was washed out with three quarts of sterilised water. The patient was quite well a year later. The points of interest were the constant hæmorrhage (a sign insisted upon by Dr. Cullingworth), the position of the fœtus partly within and partly outside the sac, and the cause of the suppuration.—Dr. G. E. HERMAN said that Dr. Phillips's specimen was important as throwing light on the possible results of tubal mole and abortion. In many cases tubal moles caused little trouble and seemed very harmless things, so that the question arose whether it was good practice to advise operation when this condition was suspected. Dr. Phillips's specimen showed that a tubal mole was not always harmless.—Dr. A. L. GALABIN said that he

had met with a considerable number of cases diagnosed with reasonable certainty as extra-uterine fœtation in which a lump of notable size had gradually disappeared without any operation. If the ovum had not reached two months of development there was a reasonable prospect that the lump would become absorbed, but if there was an embryo as large as that shown suppuration or septic change would most likely occur.—Dr. P. HORROCKS did not think that all cases of tubal moles or hæmatoceles due to tubal pregnancy should be operated upon and gave details of cases under his care which were recovering satisfactorily under expectant treatment.—The PRESIDENT held that bleeding from an unruptured tube bearing a hæmorrhagic mole must be considered as a third form of pelvic hæmorrhage. Pelvic hæmatocele, intra-peritoneal, was occasionally due to other causes than tubal gestation and was not invariably fatal. Taylor was probably correct in insisting that broad ligament hæmatoma was due to tubal gestation only in the minority of cases. He (Mr. Doran) thought that a large tubal mole was a source of danger and should be removed.

Dr. JOHN PHILLIPS read a paper on a case of Acute (?) Idiopathic Peritonitis complicating Pregnancy and Labour. He related the case of a woman nearly seven months pregnant and in good health who fell over a chair-back on her left side. Much pain and persistent vomiting followed. She was found in a very serious condition, the abdomen was distended, the pulse was 120, the temperature was 103° F., and the respirations were 48. Labour came on, but no true pains could be distinguished, and terminated very quickly. Her condition became rapidly worse and she was admitted into King's College Hospital. After consultation Mr. Peyton Beale opened the abdomen and found general peritonitis, but no apparent cause The patient died in a few hours. Full details of the post-mortem examination were given. Short histories of five other cases were related from the practice respectively of Matthews Duncan (two), Simpson, Romiti, and W. J. Gow. Dr. Phillips thought that three important points for discussion arose out of the case—viz.: (1) the cause of the infection; (2) the question of operative interference; and (3) the share the blow took in producing the illness —Dr. GALABIN had lately met with a case of general peritonitis not associated with pregnancy where the causation could not certainly be determined. The patient was 17 years of age, exceedingly ill, and the abdomen was greatly distended. A large quantity of sero-purulent fluid was evacuated by abdominal section. The intestines were bound down posteriorly, but the effusion extended from the diaphragm to the pouch of Douglas, the uterus and broad ligaments being bathed in it anteriorly and posteriorly. There was no sign of tubercle or history of gonorrhœa. The tubes were not distended, but a few drops of pus could be squeezed from the right tube. He thought it most likely that in this case and in Dr Phillips's case the tube was the primary source of inflammation. The patient improved, but died under an anæsthetic three weeks later and no post-mortem examination was made.—Dr. HORROCKS thought the word "idiopathic" had practically dropped out of medical literature for years. He mentioned a case in a girl, aged 15 years, where every known cause of peritonitis having been eliminated by the physician, idiopathic peritonitis might have been diagnosed; on abdominal section, however, he had found tuberculous peritonitis. The fact that no bacteriological examination had been made in Dr. Phillips's case left the real pathology in doubt; still, in all probability the cause of the disease was some form of microbe.—Dr. J. INGLIS PARSONS did not believe that inflammation ever occurred without a cause. He suggested that the fall might have caused bruising of the intestine which, thus damaged, allowed bacteria to pass through into the peritoneum. There was also the question of cold and chill; the general physicians allowed that pleurisy might be caused in this way, then why not peritonitis?—Dr. AMAND ROUTH referred to Mr. Treves's statements in his Lettsomian Lectures where he had shown that the bacterium coli commune was capable of becoming extremely virulent after the occurrence of inflammation or bruising of the intestine —Dr. ROBERT WISE inquired about the condition of the spleen.—The PRESIDENT believed that direct infection of the peritoneum through the ostium of the Fallopian tube without any previous infective phenomena in the vagina, uterus, or tube was almost, if not entirely, unknown. Puerperal infection, it appeared, did not reach the peritoneum through the tube.—Dr. JOHN PHILLIPS replied.

The following specimens were shown:—

The PRESIDENT: Double Hydrosalpinx without Salpingitis.

Dr. WALTER TATE: (1) Sarcoma of the Ovary, showing Necrosis and Suppuration in the Centre; and (2) Calcareous Fibroid of the Cervix.

Dr. G. F. BLACKER: Fibro-adenoma of the Cervix.

Dr. HERBERT SPENCER: Peculiar Mucous Polypus of the Cervix.

MANCHESTER THERAPEUTICAL SOCIETY.

The Use of Glycero-phosphate of Soda.—The Comparative Value of Galenical Preparations and Isolated Active Principles.

A MEETING of this society was held at Owens College, Manchester, on Nov. 22nd, Professor DRESCHFELD, the President, being in the chair.

Dr. T. HARRIS made a communication on the Use of Glycero-phosphate of Soda. He had employed this drug very largely during the last three or four years, and although he was unable to bear out all that had been said by others in its favour he believed that it had considerable value in certain conditions. From their chemical constitution and their relation to lecithin there seemed a probability on *a priori* grounds of the glycero-phosphates acting as food to the nervous system. In 1894 Professor Robin published his observations on the physiological action and therapeutic uses of the glycero-phosphates. He considered that they favoured assimilation and metabolism, especially acting on the sulphur metabolism, and exerting a sparing influence on the combined phosphates. It was impossible to believe that the glycero-phosphates could be useful in all of the large number of diseases in which beneficial results had been claimed by the employment of these drugs, but such diseases as neurasthenia, Addison's disease, &c., seemed likely to be favourably influenced by them. Dr. Harris had used only the glycero-phosphate of soda and not the other compounds. This could be obtained either as a 75 per cent. solution, which was jelly-like, or as a 50 per cent. solution, which was liquid. The dose was from 15 to 40 minims three times daily of the weaker solution. Given in a mixture with tincture of orange and chloroform water it was quite palatable. Dr. Harris had used the drug chiefly in nervous affections, neurasthenia, and hysteria and functional affections, but he had also tried it in diabetes, &c. In most cases of neurasthenia it had failed, but some patients had been benefited by it. Very few cases of true hysteria had been favourably influenced, especially in long-standing cases. The best results had been obtained in the treatment of nervous exhaustion from overwork, in which it had often had really good effects.—Professor D. J. LEECH said that he had not tried the glycero-phosphates to any great extent. His experience had not lead him to think highly of the usefulness of these compounds.—Dr. R. B. WILD had used glycero-phosphate of sodium on himself and others for weakness following influenza and for nervous exhaustion from overwork with apparently distinct advantage. It seemed to him that the calcium salt might be even more beneficial than the sodium salt.—The PRESIDENT had used sodium glycero-phosphate for nine months He had found it fail in some cases of neurasthenia and it failed to relieve the pains of locomotor ataxy. It seemed to do good in some functional diseases.

Professor D. J LEECH opened a discussion on the Comparative Value of Galenical Preparations and Isolated Active Principles. He pointed out that experiments on the physiological action of drugs had mostly been made with isolated active principles. It had been said that as drugs contained several active principles the action of the preparations of the drug must differ from the action of the chief active principle. Professor Leech believed that in the case of some of the most important drugs there was no real evidence to show that the action of the drug was materially different from that of its chief active principle. He pointed out that now that several of the principal drugs of the Pharmacopœia had been standardised the question was a very important one and that with the more uniform strength of the drug preparations under the new Pharmacopœia it would be quite feasible and very desirable for members of the Manchester Therapeutical Society to undertake an investigation of this question, as if there was no real difference between the action of the galenical preparations and the preparations of the isolated active principles the Pharmacopœia might be much simplified and

the use of active principles much extended. Professor Leech showed how, by a consensus of action among medical men, quinine had already largely taken the place of cinchona bark and comparatively few people now used jaborandi, whilst many relied upon pilocarpine. Very little accurate knowledge existed about the action of the less used alkaloids present in opium; mostly they occurred in very small quantity, and Professor Leech believed that for practical purposes morphia and opium had the same action. Many authors gave a list of differences in the action of morphia and opium, but the same list appeared modified more or less in nearly all the text-books and it could be traced back to some of the earlier works, such as Charvet and Pereira. Trousseau and Pidoux denied that there was any difference, Bintz advised the use of morphia only, and Cushny thought that the other alkaloids had very little effect. Most writers stated that morphia acted less as a diaphoretic than opium, but Professor Leech was inclined to doubt the value of opium as a diaphoretic, though in combination with other drugs the action of opium might be different from its action alone. Most authorities said that morphia caused more irritation of the skin than opium, but it was a question whether there was any difference when the drugs were administered in the same manner. Nearly all agreed that morphia had a less astringent effect on the bowel than opium and this might be because the latter was more slowly absorbed. In diabetes opium was preferred by some to morphia, but Fraser found morphia quite as effective. As regards diarrhœa Professor Leech was not positive but he thought that perhaps opium might be rather more useful than morphia. Belladonna contained atropine and hyoscyamine, young belladonna roots containing chiefly hyoscamine, but this could readily be transformed into atropine. Pharmacologically there was very little difference between atropine and hyoscyamine and none between atropine and belladonna. Yet therapeutically they were used differently. The preference for belladonna preparations might be due partly to the fact that they were more convenient to take and partly because physiological effects were more often seen from the use of the alkaloid. This might have been due to the fact that under the old Pharmacopœia belladonna preparations often fell much below their proper strength in atropine. Professor Leech was not convinced of any real difference which should make belladonna preferable to atropine. The minute quantity of brucine in nux vomica probably had no appreciable influence. In practice nux vomica was usually given in dyspepsia and strychnine as a nerve tonic. Was this difference in therapeutic use founded on any sound basis? Professor Leech thought not, though if nux vomica was more slowly absorbed extract of nux vomica might be more suitable than strychnine for intestinal conditions. If cantharidin could replace cantharides it would be an advantage especially in India, where a species of beetle is found which contains much cantharidin, and the use of this would save the necessity of importing the Spanish fly. Greenish had suggested formulæ using cantharidin instead of cantharides for the blistering preparations of the Pharmacopœia. Professor Leech had tried these preparations and had found them efficacious, though some seemed to produce rather less marked effects than the corresponding cantharides preparations.—Dr. T HARRIS, Dr. F. J. H. COUTTS, Dr. R. B WILD, and the PRESIDENT took part in the discussion, the speakers generally agreeing with Professor Leech that there appeared to be practically no difference between the action of the drug and its active principle in the cases of atropine and belladonna, strychnine and nux vomica, quinine and cinchona, pilocarpine and jaborandi; but some made a reservation in the case of opium and morphia, believing that there were some differences leading to preference for one or the other in certain conditions.—Professor LEECH, in his reply, thought that many therapeutic views were founded on imperfect observations, and these views were passed on from one book to another and generally accepted. It was time that many of these beliefs were put to the test of experiment and he thought that the Manchester Therapeutical Society could perform a useful function in this respect.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Radical Cure of Hernia.

THE second ordinary meeting of this society was held on Dec. 6th, Mr. ALEXANDER MILLER, President, in the chair.

Mr. DAVID WALLACE showed a woman, aged 44 years, who had undergone Pylorectomy by Kocher's method in June last and was now in perfect health. On opening her abdomen a tumour of considerable size was found implicating the pylorus and about a quarter of the pyloric end of the stomach. The severed end of the duodenum was stitched to the posterior wall of the stomach. She suffered much from sickness after the operation, but on making her lie on her right side (as Kocher recommends) this soon abated and she made an uninterrupted recovery, being fed by the mouth the whole time.

Mr. HAROLD STILES showed: 1. A child after operation for Severe Deformity following a Burn of the Ankle. The patient was a girl, three years of age, who had marked deformity of the right leg, the foot being doubled up towards the tibia. There had been loss of bone from the internal malleolus. A transverse incision was made across the cicatrix and parts of the tibia and fibula were removed and the foot was straightened. To fill up the gap in the incision-wound a flap of skin was taken from the redundant skin on the outer side and turned round on its pedicle so as to fit. 2. A child with Ventral Hernia after operation for Suppurative Appendicitis. The stitches had to be removed from the abdominal wound four days after operation on account of purulent infiltration and the wound burst open on the child crying. 3. An infant after operation for Intussusception which was found to be secondary to acute appendicitis. The infant was only three months old. On opening the abdomen the cæcum and lower end of the small intestine were found to be indurated but no intussusception was then present. The appendix was acutely inflamed; how could this have arisen in a child who was fed on the breast? There had evidently been intussusception which had spontaneously reduced itself. Mr. Stiles advocated making the abdominal incision in children above the umbilicus.

Dr. A. SCOT SKIRVING exhibited: 1. A girl, aged four years, from whom he had Subperiosteally Removed One-Half of the Lower Jaw. The patient first had a swelling on the left side of the lower jaw which was incised and scraped. The wound, however never healed and it was found necessary to remove the jaw subperiosteally. Two days later facial paralysis came on though no branch of the facial nerve had been severed, and even now there was a certain amount of apparent paralysis—a dragging down of the left side—which was probably due to the unopposed action of the pterygoid muscles of the healthy side. 2. A young man after Removal of a Gangrenous Appendix which had Ruptured close up to the Cæcum. The case was one of fulminating appendicitis and the man when first seen was apparently moribund. On opening the abdomen a condition of general peritonitis was found and two pints of stinking pus were removed. The stump of the appendix was pushed into the cæcum and no attempt was made at stitching up the parts. Two drainage tubes were inserted. No hernia resulted, as Dr. Skirving believed that the soundness of the abdominal wall after such operations depended on keeping the patient in bed for a long enough period.

Dr. SCOT SKIRVING also showed a Perforated Appendix with Concretion from a patient who complained merely of acute pain over McBurney's point.

Mr. DAVID WALLACE showed: 1. The Tumour removed from the case of Pylorectomy which he had narrated. 2. Tumour of the Pituitary Body from a man who had fallen downstairs while drunk. The next day he was brought to hospital and the diagnosis being either fracture of the base or apoplexy nothing was done for him and he died. At the post-mortem examination a large tumour was found growing from the pituitary body and invading the brain tissue deeply. The sella turcica was greatly expanded. 3. Calcareous Mass from the Cerebellum of a girl, aged 18 years. She suffered from a fœtid scanty discharge from both ears. The right mastoid sinus was opened and scraped and the patient seemed better. In two days, however, her temperature rose to 103° F. and she had great pain in the left ear. This in turn was operated upon. In 48 hours, however, she became delirious and died, and at the necropsy a hard, irregular mass was found in the left lobe of the cerebellum. 4. The Skull from a lad, aged 14 years, who fell from a height of 20 feet, striking the right side of the forehead. On admission to hospital he was unconscious and evidently suffered from concussion. There was no escape of blood or of cerebro-spinal fluid. At 9 o'clock on the following morning he was sensible and half an hour later was unconscious and dying. The skull was opened

on the left side and 10 ounces of blood were removed. He died six hours later and at the post mortem examination a transverse fracture was present running across the anterior fossæ and implicating the meningeal arteries.

Dr. ALEXANDER MILES showed: 1 An Enchondroma of the Femur with Stereoscopic Photographs. As the tumour had grown rapidly of late amputation of the femur was performed. 2. Specimen of Malignant Growth excised from the Cæcum of a man, aged 51 years. The tumour was attached to the cæcum and also to the transverse colon which it had dragged down. Instead of making two anastomoses the whole of the cæcum with the ascending, and part of the transverse, colon were excised. 3 The Cæcum excised from an almost similar case. 4. Specimen from Fracture of the Base of the Skull, with Photographs.

Dr. HARVEY LITTLEJOHN showed: 1. A Dermoid Cyst of the Ovary from a woman who had died from heart disease. 2. Calcareous Degeneration of the Heart from a woman, aged 35 years. She dropped down dead suddenly and the necropsy showed that the whole of the left ventricle was changed into a calcareous mass.

Dr. LOVELL GULLAND gave a Microscopical Demonstration of Cohn's Method of showing Fat in Urinary Deposits and other Fluids.

Dr. A. D. WEBSTER exhibited Spray Apparatus which he had devised for the application of Medicated Hot Air to Mucous Membranes.

Dr. CHARLES WATSON MACGILLIVRAY read a paper on the Radical Cure of Hernia with the statistics of seven years' experience in the Royal Infirmary.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Venereal Diseases and their Therapeutics.—The Treatment of a Fractured Patella by an Improved Method.—Urinary Infiltration.

A MEETING of this section was held on Nov. 10th, the President, Mr. R. L. SWAN, being in the chair.

The PRESIDENT having delivered an address on Venereal Diseases and their Therapeutics,

Mr. GLASGOW PATTESON read a paper on Suture of a Fractured Patella by an Improved Method. He recommended the use of a strong silver D-shaped wire, which necessitated only a single drilling of the bone and was sufficiently strong to allow of very early passive motion of the joint being effected without risk to the injured fragments. This was an important fact in early and complete restoration of the function of the limb.—Mr. HENRY GRAY CROLY was opposed to the risk of opening the knee-joint. He thought ligamentous union just as good. When last in London he had inquired if there had been any deaths from opening of the joint in fracture of the patella, and found there had been.—Dr L. H ORMSBY had seen many cases treated by the Dublin method with a short ligamentous band, and frequently when the patient was afterwards walking about people could not say which patella was broken. The advantages of bony union did not appear to him so great as those of a short ligamentous band.—Mr. PATTESON, in reply, said he had never seen death follow the modern method of treatment which, of course, should be used only in suitable cases. By the open method bony union and absolute mobility were made certain within a short time. He felt more and more convinced that with proper precautions the opening of the joint was the best method.

Mr. H. GRAY CROLY read a paper on Urinary Infiltration, illustrated by a series of cases which came under his care in his hospital and private practice. Mr. Croly exhibited six beautiful coloured drawings taken from the patients by Dr. Paul Carton. Some were made in the theatre before operation, others at a later period during the healing process, and some when the wounds were healed. Mr. Croly made important reference to the surgical anatomy of the region involved in cases of infiltration of urine, including a description of the attachments of Colles's middle femoral fascia. All the cases described were very severe. Only one fatal case occurred in Mr. Croly's list; in that case the patient delayed in seeking admission to hospital until the local and constitutional symptoms were far advanced. Mr. Croly said he had never seen in any surgical work a drawing of urinary infiltration. In conclusion he described gangrenous erysipelas of the scrotum as an affection which might be mistaken for infiltration of urine and differentiated the cases. (The drawings were examined with much interest by the President and the Fellows and Members of the Society, and the communication elicited an interesting discussion.)—Mr. R B M CAUSLAND asked if Mr. Croly thought that incision of the testicle in these cases would be dangerous. He thought it remarkable that so many patients recovered from injuries of this kind.—Professor E. H. BENNETT had seen a case where a man was "butted" in the abdomen and injury to the bladder was supposed to have resulted. A catheter was passed and bloody urine was drawn off, but the patient objected to the passing of the instrument and afterwards passed urine for himself. He lived for nearly two months and died, not with urinary symptoms, but from obstruction to the rectum. At the post-mortem examination urinary extravasation into the pelvis was found, although there were no external phenomena to indicate this.—Mr DOYLE had seen extravasation of urine in a boy, aged four years, who had fallen out of bed, causing injury to the perineum. He had obtained a satisfactory result by the usual incisions. He did not see how a difficulty could arise in the diagnosis.—Dr. J. KNOTT said that a large majority of strictures occurred immediately in front of the triangular ligament and the great trouble in treatment was that injections and instruments were generally stopped here by the ligament.—Mr. CROLY, replying to Mr. M'Causland, said he did not think incision would be dangerous if it did not go through the tunica albuginea. The diagnosis should present no difficulty except where infiltration occurs behind the triangular ligament, but he had already mentioned a case of urinary extravasation in which the man's scrotum was tapped with a trocar and cannula. The most deceptive cases were those in which abscess of the perineum existed.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at the Medical School, Leopold-street, Sheffield, on Nov. 17th, the President, Dr. A. Donald, being in the chair.—Dr. W. J. Sinclair related a case of Abdominal Pregnancy. The patient had been ill some months with a history of tubal pregnancy and rupture. The fœtus could be plainly felt from the abdomen. Abdominal section was performed. A macerated fully-developed fœtus was removed together with the placenta. The fœtus lay free in the abdominal cavity. No evidence of amniotic covering was detected. The patient made a good recovery.—Remarks were made by Dr. J. H. Keeling and the President.—Dr. T. Arthur Helme related two cases of Extirpation of the Uterus for Extreme Hypertrophy and Prolapse. The patients, multiparæ, aged 47 years and 52 years respectively, had suffered for many years from prolapse of the uterus together with the anterior vaginal wall and bladder. The posterior vaginal wall was not everted. The cervix was extremely hypertrophied. The fundus uteri was felt in its normal position behind the pubes in each instance. The length of the uterine cavity measured five and a half inches and six and a half inches respectively. The uterus was removed by ligaturing the broad ligaments in section. The peritoneal cavity was completely closed by careful suturing. By means of buried sutures the large raw connective tissue area covering the bladder was diminished and the bladder folded upon itself. The cut edges of the vaginal walls were then sutured, a broad surface being united. At a second operation the perineum was repaired and the vaginal outlet was narrowed. The results were quite satisfactory; the patients walked well, had no bladder trouble, and did not require a pessary. Extirpation of the uterus by itself would not cure cases of complete prolapse of the vaginal walls forming a hernia of the pelvic floor. In these cases plastic operations combined with ventro-fixation of the uterus gave good results.—Dr. A. W. W Lea remarked that in these cases it was always advisable to remove the ovaries and tubes inasmuch as they often became prolapsed and painful. This might necessitate their subsequent removal.—Dr. W. K. Walls related a case of Double Ovarian Abscess with Purulent Salpingitis in which the uterus and appendages were removed by vaginal radical operation. The patient, a multipara, had pyrexia and pelvic inflammation. Whilst under observation rapid enlargement of each ovary was detected. Ovarian abscess was diagnosed and the operation at once carried out.

Each ovary was a thick-walled bag of pus. Both Fallopian tubes were swollen and infiltrated; they contained purulent secretion but the fimbriated extremity was not occluded. The patient made an excellent recovery.—The President related two cases of Unusual Abdominal Tumour. The first case was a tumour of the suprarenal capsule. The patient, who was 37 years of age and married, had an abdominal swelling which was of the size of a fœtal head at term. It was very mobile and fluctuant and could not be pushed down into the pelvis. A diagnosis of cyst of the kidney or ovarian cyst was made. On opening the abdomen the tumour was found to be retro-peritoneal and crossed by the descending colon. The peritoneum was divided and the cyst enucleated. There was no pedicle. The cyst lay immediately in front of the left kidney which was normal. The patient made a rapid recovery. On section the tumour contained fluid blood and clots. The cyst wall showed fibrous septa enclosing polyhedral granular nucleated cells closely resembling the "zona glomerulosa" of the normal suprarenal capsule. The second case was one of Cystic Sarcoma of the Pelvis. The patient, who was 26 years of age and single, had a symmetrical cystic tumour springing from the pelvis and reaching the level of the umbilicus. The uterus was small and separate from the tumour. An ovarian cyst was diagnosed. On opening the abdomen the cyst was found to be retro-peritoneal. The peritoneum was incised and the cyst punctured. Three pints of blood-stained fluid were evacuated. The cyst was not connected with the uterus or appendages but was found to grow from the connective tissue near the left sacro-iliac joint. The tumour was shelled out with difficulty and the patient made a good recovery. Microscopically it was a round-celled sarcoma with cystic degeneration. These cases were striking examples of the difficulty of accurate diagnosis of abdominal tumours.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Dr. D. Burgess, the President, being in the chair.—Dr. Hall showed (1) a case of Ulcerative Syphilide; and (2) a case of Eczema of the Face, Neck, Arms, Trunk, and Popliteal Spaces due to Paraffin.—Dr. George Wilkinson read the notes of a case of Excision of Gangrenous Umbilical Hernia with Secondary Enterorrhaphy. The patient was a stout woman, aged 49 years, the subject of umbilical hernia for 26 years. When admitted to the Royal Hospital symptoms of strangulation had been present for about 40 hours. The hernial sac was about five inches in diameter. The sac and contents were both gangrenous. The whole was excised. The contents of the sac were 12 inches of transverse colon and a large mass of omentum. Paul's tubes were fitted to the divided ends of the colon which were fixed to the wound. Secondary enterorrhaphy was performed by means of Murphy's button. The patient made a good recovery. The specimen was shown.—Mr. Dale James showed a painting of a case of Erythema (?) which gained its chief interest from the diversity of the opinions as to its origin. The lesions existed on the chest and right arm, the patient being left-handed. Each spot began as an indefinite rose-coloured patch; this increased and developed into a circle, the centre clearing up. In the circumference minute vesicles appeared and dried up; then exfoliation of the cuticle took place. The patient was a single woman, aged 30 years, was highly neurotic, and had had this trouble for seven years.—Mr. H. Lockwood read the notes of a case of Evulsion of the Lower Jaw. The patient, a woman, aged 35 years, was admitted as an out-patient at the Royal Hospital on Nov. 5th, 1898. She had been suffering from pain and swelling in the lower jaw for three months. A swelling was found below the anterior surface of the jaw and fomentations were ordered. As she did not improve she was made an in-patient on Nov. 25th. An incision was made and pus was evacuated. Subsequently the bone was scraped and found to be extensively necrosed. As the disease progressed it was thought advisable in April last to attempt removal of the jaw as far as the angle on each side, that being apparently the limit of the disease. A skin incision was not feasible owing to the septic condition of the tissues. The symphysis was divided and the bone sawn through at the angle, but on seizing it with lion forceps after a little manipulation the entire half of the jaw came away. The other half was removed in a similar manner. There was no hæmorrhage and the patient made a good recovery. Owing to the periosteum being left behind a new jaw was being formed, but of course without the articulation. The patient could talk well and chew anything.—Mr. Godfrey Carter showed a girl, aged 14 years, who was totally blind and who was suffering from the effects of an Intracranial Tumour, probably tuberculous in nature and situated in the cerebellum. Her mother and sister died from phthisis, but up to three and a half years ago the patient has been apparently healthy, though the large size of her head has been commented upon from infancy. Illness set in with severe frontal headache; when this had lasted for a week the patient suddenly fell down unconscious. There were no convulsions. Consciousness returned in two hours, but she was blind and paralysed in the face and all the limbs. There was also complete anæsthesia of the limbs and the left side of the face. Sensation returned on the second day, but power only after two or three months. She was able to walk in six months. Vertigo was a prominent symptom. There was no nystagmus. At this time there occurred a second attack something like the first. Coma lasted one hour. Sensation was not affected. There was incontinence of urine for three weeks afterwards. She was in bed paralysed as before for six months and was only able to walk in a year's time. From that time improvement had been gradual. She was intelligent and active, but, in addition to blindness, there was paralysis of the left sixth and seventh cranial nerves and the left side of the body was weaker than the right. The knee jerks were abolished and her gait was stumbling and uncertain. The head was large, as from hydrocephalus, and presented a marked rectangular prominence of the occiput. There was also some retraction of the head.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this association was held on Dec. 1st in the University College, Dundee, Dr. C. Templeman, the Vice-President, being in the chair.—Professor D. MacEwan gave notes of a case of Tracheal Stenosis following cut throat. The patient, a man, aged about 40 years, sustained the injury in October, 1896, and a little time after the wound healed it was found necessary to perform tracheotomy owing to his gradually increasing difficulty in breathing. He improved, the tube was removed, and he was dismissed from the hospital, but returned some time afterwards complaining of difficulty in breathing again, and it was found necessary to open up the old tracheotomy wound and re-introduce a tube. An attempt was then made to treat the tracheal stenosis by the passage of bougies upwards through the tracheotomy wound. After a time the tracheotomy tube was withdrawn but it was found that the stricture tended to contract. An intubation tube was now made similar to O'Dwyer's tubes but much longer and broader, because O'Dwyer's largest tube did not reach the stricture. This was daily passed through the stricture and the patient was in time able to do without the tracheotomy tube, and after frequent paring of the edges and suturing, the tracheotomy wound ultimately closed. It was then found possible to discontinue the passage of the intubation tube and the patient had now returned to work, having had no difficulty of breathing for the last four months.—Professor MacEwan then made some remarks on the Value of Intubation in Laryngeal Diphtheria. He quoted statistics of his own from which he considered that in many cases intubation was preferable to tracheotomy. He then discussed the difficulties and dangers of intubation and pointed out that in his experience pushing down of the membrane had been a rare occurrence and that blockage and ejection of the tube were difficulties which could be got over by an intelligent nurse. He advised the use of larger tubes than those recommended by O'Dwyer for children and emphasised the fact that intubation was an operation which commended itself to patients and said that his results had been quite as good as those of tracheotomy in largyngeal diphtheria.—Dr. R. C. Buist read a paper on the means which should be adopted to prevent occurrence of Ophthalmia Neonatorum and Dr. A. McGillivray followed with a paper on the Treatment of the Disease when once established.—Professor MacEwan gave notes of a case of Subphrenic Abscess on which he had operated and showed the specimen. The patient was a man, aged 40 years, who had five weeks before admission to the infirmary complained of abdominal pains after meals. A few weeks later the abdomen became suddenly swollen and remained so till admission. On admission he was very breathless and in great distress. The liver dulness was replaced by tympanicity entirely and the hypodermic syringe withdrew nothing but air with fæcal odour. Two incisions were made in the right hypochondrium

and the abscess cavity was evacuated and drained. The patient failed to recover from the operation. The post mortem examination showed a perforated ulcer of the first part of the duodenum which had become adherent to the under surface of the liver, whence infection had spread to the upper surface of the right lobe of the liver, forming a large subphrenic abscess.

OXFORD MEDICAL SOCIETY.—A meeting of this society was held on Dec. 8th at the Radcliffe Infirmary, Mr. H. P. Symonds, the President being in the chair.—Mr. G. W. S. Farmer showed a man, aged 44 years, in whom he had excised the tongue by Sédillot's operation. There was an epitheliomatous growth on the under surface of the tongue, invading the frænum and adherent to the lower jaw. By dividing the symphysis and separating the rami plenty of space was obtained to remove the enlarged glands and tie both linguals, and good approximation of the cut ends of the bone was easily obtained by wiring round the molars.—Mr. Farmer also showed a case which he had operated on for what he regarded as Abscess of the Lung, resulting from the bursting of a localised empyema into the lung tissue. The patient, a man, aged 48 years, had had an attack of pneumonia, the symptoms of which did not clear up. There was evidence of localised pus, a portion of which was aspirated. The eighth rib on the right side was resected for two inches and fœtid pus and gangrenous lung tissue were evacuated A tube was inserted, but the discharge continuing very offensive iodine baths were given with very good effect, the patient soon recovering. It was noticed that the day before operation there had been some fœtid purulent expectoration.—Dr. W. T. Brooks and Dr. W. Collier both took the view that this was not a case of primary abscess of the lung but rather of secondary infection from a localised empyema.—Mr. Farmer showed a third case, a boy who had sustained Severe Laceration of the Arm from a mill wheel accident. There was a fracture of the surgical neck of the humerus, together with a lacerated wound of the axilla, laying bare the axillary vessels and nerves. On the wrist there was a laceration exposing the flexor tendons and median nerve, with a slighter wound on the dorsal aspect. The injuries were so severe as to suggest the question of amputation, but by careful adjustment and suturing a very good result was obtained, with only slight muscular wasting.—Dr. W. J. Turrell read notes on the Use of Anti-streptococcic Serum in a case of Puerperal Septicæmia. The disease ran a course of three weeks, during which he used 20 injections of serum (British Institute), the dose being 10 cubic centimetres. For the first 15 injections the temperature was reduced two degrees after each dose; it then seemed to lose its effect and quinine was found more useful. The highest temperature throughout was 105·4° F. No bad effects were noticed.—Dr. R. H. A. Whitelocke described two cases in which he had used the serum; these he had reported at the meeting of the British Medical Association at Portsmouth and they had since appeared in the *British Medical Journal*. On the whole he was favourably impressed with the serum in cases of puerperal septicæmia; he specially noted its soothing effect on the patient.—After discussion the meeting adjourned.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—A meeting of this society was held on Dec. 4th, Mr. Storer Bennett, the President, being in the chair.—Mr. C. Robbins showed an ingenious Arrangement for Cooling Composition when Modelling the Mouth; and Mr. G. Brunton exhibited some Instruments which he had found useful in practice.—Mr. M. F Hopson read an interesting communication on three cases of General Hypertrophy of the Gums. One case occurred in a man, aged 43 years, who was a working engineer by occupation. The gums were enormously hypertrophied, were deeper in colour than normal gum tissue, and in places, particularly in the front of the mouth where the growth had assumed a mulberry form, they were mottled and purple. In the molar regions they met by broad flat surfaces. To the touch the tissue was firm and hard. There was no pain and the only inconvenience complained of was inability to speak distinctly. The teeth, with the exception of the maxillary left first molar, were all present, and as far as could be ascertained were free from caries, but exhibited signs of attrition. The patient never remembered the gums in any other condition and was quite unwilling to have any operation performed. About one month subsequently to being seen he developed a swelling over the right eye, which in turn displaced that organ downwards and forwards. This growth, which proved to be a sarcoma, was removed at St. Thomas's Hospital, but the patient died. The two other cases reported occurred in the children of this patient—namely, in a boy aged six years and a girl aged 10 years. The interesting features of the cases were (1) the distinct transmission of the condition from parent to child, and (2) the presence in the same individual and in the same region of the body of sarcomatous growth with hypertrophy of the gums.—Mr. W. H Dolamore read a paper on the Immediate Regulation of Irregularly Placed Teeth. He stated that he had performed the operation over 20 times and that from the experience which he had gained he considered that it was a most useful operation for remedying irregularities in adults. The operation consisted in dividing the alveolar process on either side of the tooth to be removed and then bringing the tooth and encircling alveolus forward or backward as required, the tooth being kept in its new position by means of splints.

MIDLAND MEDICAL SOCIETY.—The fourth ordinary meeting of this society was held on Dec. 6th at the Medical Institute, Birmingham, the President, Dr. E. Rickards, being in the chair.—The following gentlemen were elected members of the society: Mr. Frank Rowland and Mr. T. Llewellyn Parry.—Mr. Arthur Loxton showed a man and a woman who were both the subjects of Lupus Erythematosus of the Scalp. In the one case there was a history of three years' and in the other of 10 weeks' duration. These cases illustrated the different appearances of this somewhat uncommon disease in its early and in its later stages.—Dr. C. E. Purslow showed a Uterus removed by Vaginal Hysterectomy for Chronic Metritis. The patient, who was the mother of two children, had suffered since her confinement five years previously from menorrhagia, severe pelvic pain, and purulent discharge. She had been under treatment for two years, and as all the methods tried, including curetting, had failed to give relief and her health was steadily deteriorating vaginal hysterectomy was proposed and was readily agreed to by the patient. The uterus after removal weighed five and three-quarter ounces, its walls were thickened. and a histological examination made by Dr. J. D. Stanley showed that the enlargement was entirely due to chronic inflammatory changes in the walls. The left ovary was found to be cystic and was removed. The right ovary and tube were not removed. Although only three months had elapsed since the operation the patient expressed herself as feeling much stronger than before and she had been free from pain and hæmorrhage.—Dr. Purslow also showed a Fibrocystic Tumour of the Posterior Lip of the Cervix Uteri of the size of two fists which he had removed by operation.—Mr. W. Watkins-Pitchford read a paper on the Clinical Aspects of Plague.

Rebiews and Notices of Books.

Optics: A Manual for Students. By A. S. PERCIVAL, M.A., M.B.Cantab. London: Macmillan and Co. 1899. Pp. 400. Price 10*s*.

OPTICS, like other branches of physical science, may be investigated either experimentally or mathematically, the object of the latter method being generally to arrive at a knowledge of the laws underlying observed phenomena and to devise means for the attainment of certain results. Sir Isaac Newton has undoubtedly been the foremost worker in this field, for not only does his decomposition of white light into its constituent colours remain the most important of optical experiments, but by his invention of fluxions, since known, with some modifications of notation, as the differential calculus, he supplied a method of research indispensable to the mathematical study of the science One of the simplest optical experiments consists in throwing on a screen the image of a window reflected from a concave spherical mirror, for which purpose an ordinary clock glass for laboratory use answers sufficiently well. It will be found that the window bars are not equally well defined at all parts on account of

the various portions of the image being focussed in different planes. Elementary treatises on optics, being necessarily restricted to ordinary algebra and the geometry of Euclid, are unable to carry the explanation further, but in advanced treatises such as that of Dr. Percival it is shown that all the various parts of the object focussed lie on a surface generically called a caustic and in this particular instance generated by the revolution of an epicycloid round its principal axis. Caustics are also formed by refraction at all transparent curved surfaces and a knowledge of their properties is essential to a due comprehension of the theory of optical instruments; for spherical reflectors most of those properties can, of course, be studied in the generating epicycloid. With this object the reflector is usually referred to rectangular coördinates, the first differentials of which define the position of the reflected ray and the second differentials the locus of the intersection of two consecutive rays. Dr. Percival has, however, materially simplified this complicated part of the subject by an ingenious device which does not appear in the standard text-books and is therefore presumably original, although he does not expressly make this claim. Any reflected ray is, of course, a tangent to the caustic and cuts the axis of the mirror. He then takes tangential-polar coördinates for the caustic—namely, (1) the perpendicular p drawn from the luminous point to the reflected ray, and (2) the angle ψ which subtends one-half the mirror and is contained between the reflected ray and the central axis of the mirror. From this by two quite simple differentiations of p with respect to ψ he obtains easy expressions for the radius of curvature and the positions of cusps. The same principle can be applied with great facility to the tracing of caustic curves no matter what the position of the luminous point may be in front of the mirror. This instance will serve to show the mathematical ability with which Dr. Percival has treated his subject. Another example of his capacity for simplification will be found in the sections on the circle of least confusion. The material in general, and the practical examples, of which a great many are given, have been selected with special reference to the requirements of ophthalmic students, who will find in these pages an ample exposition of the essentials of optics, conveyed in as plain and easy terms as the nature of the subject permits.

A Farmer's Year. By H. RIDER HAGGARD. With 2 Maps and 36 Illustrations by LÉON LITTLE. London: Longmans, Green, and Co. One vol. 8vo. 1899. Pp. 470. 7*s.* 6*d.* net.

MR. RIDER HAGGARD, to quote his own prefatory words, has proposed to write a book which should be "the journal of a farmer's year rather than a work about farming, setting forth with other incidental things the thoughts and reflections that occur to him, and what he sees day by day in field, or wood, or meadow, telling of the crops and those who grow them, of the game and the shooting of it, of the ways of wild creatures and the springing of flowers, and touching perhaps on some of the thousand trivial matters which catch the eye and occupy the attention of one who lives a good deal in the company of Nature, who loves it and tries to observe it as best he may." And his words exactly describe his book, which is not an elaborate work on scientific farming, but a medley of original information and reflection making a truly personal diary. Here is no expert advice on farming. Mr. Haggard does not give price-lists of manures other than those which he has employed and includes no diagrams of elaborate cream-separators, of sanitary piggeries, or of patent hen-coops. He tells quietly from day to day of the work that has lain under his hand as a landowner in Norfolk, keeping in his occupation from 300 to 400 acres of land and trying to improve his property, to deal well by men and stock, to learn from those whose practical experience gives them a right to speak, and to apply to particular circumstances a wide range of general knowledge acquired under many skies. And in every line of "A Farmer's Year" Mr. Haggard shows that he loves the country.

Such records as these by a man who can write both of what he thinks and what he sees so that all can understand, who can be simple without being slangy and dignified without being stilted, are of interest to all thoughtful people; while in our opinion this book should be particularly valuable as well as interesting to a large class of country medical men. We are not advising the medical practitioner in the country to hire land and to try to farm it, nor do we think Mr. Haggard's pecuniary experiences are such as to tempt many Norfolk or Suffolk men to invest in land or lease it; but the perusal of such a book as this will make the medical man feel more at home in living a country life if, as is the case with many medical men, he is a town-bred man. The town-bred man is quick to think that the rural environment in which he finds himself is a hopelessly stupid one, while he is quite unnecessarily ashamed of a perfectly natural ignorance of country lore. The countryman is scant and slow of speech, his occupations are such that he is but seldom called upon to make up his mind in a moment; he is compelled to lay his plans beforehand and equally compelled to be fatalistic about their results, for what foresight or prudence will annul for him the effects of a fortnight of rain, a month of drought, or an alteration in prices due to political causes? All this makes the countryman appear to the town-bred man a helpless, hopeless, and lethargic fellow, good-hearted, and therefore a person to be always treated with kindly feelings, but not as a mental equal—in fact, a clod. The view is an erroneous one founded upon ignorance; and as of all professions there is none which requires so much accurate knowledge of their fellow-creatures as the medical man's, we advise all medical men whose lot has taken them to the country to read Mr. Haggard's book. They will learn from it that "there is no single operation on the land that does not require a very considerable amount of skill to perform it properly, and this skill, acquired by years of practice, the agricultural labourer puts at the service of anyone who will pay him 13*s.* a week." No one can read this diary without seeing that the well-equipped agricultural labourer must know many things. He may have to show himself an engineer in a humble way, a carpenter in the rough, a strong man and one learned in sustaining his efforts, a little bit of a farrier and even of a midwife, and something of a weather prophet. Why, a glib townsman with a tithe of such equipments, superficial as the agricultural labourer's claim to them may be, would exact from his neighbours considerable deference to his intellect. The slow, self-contained labourer, only aware of his value because he is growing scarce, is silent as to the difficulties of his work and the townsman thinks he is silent because he has nothing to say and not because he has never learned to say it. It is ignorance only, and not always that, which keeps the townsman from dogmatising upon agriculture; and he cannot comprehend a silence due to any other cause.

And in another direction "A Farmer's Year" contains material for the medical man to think well over. In every chapter, sometimes expressed in so many words and sometimes only implied, we find a vigorous indictment against the modern passion for sophisticated food, a passion that depresses almost to the point of ruin the trade of the small British producer. "Provided that the article is pleasing to the eye, agreeable to the taste, and cheap, the British public at the present time cares nothing

for the cleanliness or otherwise of its place of origin, nothing for its purity, and nothing for the possible process which it may have undergone before they put it into their mouths." These are the author's words when speaking of foreign-made butters, and he is not using them loosely. He has been to see before he cries out. They are strong words, but it is certain, looking at the evidence given before the Committee now inquiring into the preservation of food stuffs, that they are not too strong. At present the British public dwelling in towns are absolutely indifferent as to whether they eat a really good thing—a thing that is wholesome and nutritious—or not. What is necessary to catch the fancy of the citizen, however humble, is that his purchase should look like a good thing and be cheap. Peas greener than nature paints them, butter yellower than any simple transformation from cream will render it, cream as thick as glue—these wares find universal favour, and this sort of food is largely supplied to Great Britain by continental neighbours who do not love us though they feed us, while railway rates which press so hardly upon the home producer are lightened for his foreign competitors. These are things which all our politicians should look into, and in particular they are things which medical men, the guardians of the national health, should take an interest in. That the time has gone by for the cries of "Protection" upon one side and "Free Trade" on the other to be considered as a full and satisfactory discussion of all the points at issue is, we think, undeniable. This should be recognised. The questions rather are as follows: Does not England buy much of her food from other countries? Are not large tracts of England going out of cultivation, and are not still larger tracts only remaining in cultivation at a loss to their owners, which tracts can produce the same food? Would it not be easier to ensure only wholesome unsophisticated goods being put on our food markets if the production took place more in our own country than abroad under systems of inspection and sanitary by-laws whereof England knows nothing? And, lastly, is it conducive to public health in the broadest sense that our rural districts should be depopulated and our urban districts overcrowded? Such are the questions that have arisen in our mind when reading Mr. Haggard's most interesting and suggestive book describing the decrepitude into which farming and the attendant industries have fallen in the eastern counties of England during the great agricultural crisis of the last 20 years; and we take it that the replies are of the first importance to medical men.

A Manual of Modern Gastric Methods. By A. LOCKHART GILLESPIE, M.D., F.R.C.P., F.R.S. Edin., Lecturer on Materia Medica and Therapeutics in the School of Medicine of the Royal Colleges, Edinburgh. Edinburgh: Oliver and Boyd. 1899. Pp. 175. Price 5*s*.

THE procedures necessary to carry out the chemical, physical, and therapeutical methods now employed in reference to gastric conditions are described in most modern text-books, but as these measures have found more favour in other countries than in England the majority of these descriptions are second-hand, the authors having had very little if any practical experience in carrying out the details of the processes. A medical man naturally shrinks from submitting his patient to the inconvenience and unpleasantness consequent on the passage of the stomach-tube, although it may be freely admitted that the discomfort is less than would at first sight appear; nevertheless, if the same results can be obtained by other methods most practitioners prefer to avoid mechanical means. In certain cases, however, the stomach-tube must be used and it is of great assistance if a thoroughly trustworthy work can be obtained founded on extensive practical experience. As such we can thoroughly recommend Dr. Gillespie's little book. It is most conveniently arranged for reference and the description of the various methods adopted both for diagnostic and therapeutical purposes are well and clearly described. The first chapter very properly deals with the conditions present in healthy digestion; for without a good knowledge of the chemistry of the normal secretions of the stomach but little information can be obtained from the employment of test-meals. Considerable stress is laid on the three stages of gastric digestion; if these stages are not remembered errors in judgment on the part of the medical man are very liable to occur. The next four chapters describe in detail the methods employed for obtaining the contents of the stomach and the examination of the fluid removed.

The chemical examination requires careful study and a fairly well-stocked laboratory, and this is one of the drawbacks to the general adoption of the methods under consideration, and so in the chapter headed the Apparatus and Reagents required in the Examination of the Stomach Contents we find rather a formidable list which would at once check the ardour of any private practitioner wishing to make an extensive trial of test breakfasts, &c. The description of lavage and other mechanical measures used in the treatment of diseases of the stomach is less alarming and the indications for washing out the stomach are well and moderately expressed. The electrical treatment, however, is more elaborate and is not likely to be largely adopted.

Dr. J. Thomson, assistant physician to the Royal Hospital for Sick Children, Edinburgh, contributes an interesting chapter on the Mechanical Methods used in young Children.

LIBRARY TABLE.

Memoirs of the Ekaterinoslav Medical Society. Jubilee Edition. Ekaterinoslav (Russia). 1899.—This little volume has been published to commemorate the twenty-fifth anniversary of the foundation of the Medical Society of Ekaterinoslav in Southern Russia. It contains a number of interesting articles by members of the society, in addition to a short historical account of the society itself. Dr. Zausailof writes upon the Comparative Value of Disinfectants, upon Hypnotism as a Therapeutic Means, upon the Artificial Feeding of Infants on Sterilised Milk, and upon Railway Ambulance Cars. Dr. Neishtab and Dr. Kozyrof contribute an article upon the Self-cleansing Powers of the river Dnieper and the Construction of Sewers in Ekaterinoslav. Dr. Angelson discusses Syphilis of the Heart, and Dr. Bogatzki treats of Myxœdema. Other articles deal with the Control of Food-supplies, the Sanitary Condition of Jewish Primary Schools, and the Etiology of Acute Transverse Dorsal Myelitis.

Rough Notes on Remedies. By WILLIAM MURRAY, M.D. Durh., F.R.C.P. Lond. Third edition. London: H. K. Lewis. 1899. Pp. 142.—The fact that this work has reached its third edition is sufficient proof that it has been duly appreciated and therefore few words are necessary from us as to the nature of the book. The author's chief object in publishing these "Rough Notes" was to draw attention to the fact that the action of some very old-fashioned remedies is by no means limited to our present knowledge. A large number of valuable hints as to the administration of drugs will be found throughout the volume which well repays perusal. In the third edition chapters have been added on Specific Disease, Ptyalism in Jaundice, Liqueur Brandy, and Turpentine Vapour in the Treatment of Pneumonia. In the treatment of specific disease Dr. Murray protests against the routine methods of treating secondary and tertiary syphilis—that is, against the administration of a course of mercury or the iodides with the idea that a

steady course of either or both will in time effect a cure, if a cure is to be obtained by medicine. He considers a severe course of mercury may do harm, whilst iodide of potassium may only produce temporary relief. At this juncture he strongly advocates the use of quinine and he also insists that healthy surroundings, with appropriate diet (wine) and regimen, play a most important part in dealing with advanced stages of the disease, and finally that "we must often and again cut off the specifics and try hygienic treatment to see if we have gone far enough to effect a cure and if we have not succeeded we must again attack the disease by specifics." The whole of this little volume will be found interesting as it is evidently the outcome of considerable practical experience by an author who is capable of expressing his meaning in no ambiguous terms.

Infectious Diseases Hospitals. By H. H. COPNALL. London: Hadden, Best, and Co. 1899.—This book comprises, in a compact and accessible form, the principal statutes relating to hospitals and infectious diseases with the exception of such as relate to the metropolis. A work upon statute law is usually a book rather in appearance than in fact. From the nature of the matter dealt with any such work is as a rule deficient in literary form, and this is especially so when a large body of statute law has to be set out. Then the text of the statute becomes the text of the book and the author's contributions are limited to commentary, illustration, cross-referencing and indexing. Such is the nature of the task which Mr. Copnall has undertaken in the volume before us. It is an eminently useful task, for these important and intricate enactments demand all the elucidation which a skilful editor can afford. Mr. Copnall's work appears to us to have been carried out with care and skill. His book will certainly be very useful to provincial medical officers of health and other officials concerned with local administration.

The Medical Annual Synoptical Index. Bristol: John Wright and Co. 1899.—This book is nominally an index to the volumes of the Medical Annual for the 12 years 1887 to 1898, but in reality it is much more than this. It not only fulfils all the requirements of an ordinary index, but at the same time contains in a very condensed form those facts which are likely to be wanted for reference in every-day practice. Thus, the nature, dose, or solubility of a new drug, the exact constituents of the prescription recommended for some special treatment, are matters of frequent reference and in the "index" now before us can be easily found. It is by no means necessary that the reader should possess all the 12 volumes to render this volume of use—it is a work in itself and contains a vast amount of information. We believe that every practitioner would value it and it would be of constant utility to him in the routine of his practice. Part I. contains a list of remedies and their application, and Part II. a list of diseases with the treatment suitable for each. We can speak in high terms of this publication and those responsible for its production deserve much praise.

The Englishwoman's Year-book for 1900. Second year of new issue. Edited by EMILY JANES. London: Adam and Charles Black. Pp. 340. Price 2*s* 6*d*.—This work of reference contains a vast amount of information as to employments for women, educational facilities, women's clubs, legal notes on housekeeping, servants, leases, and the like. As there are, with the exception of a seat in Parliament and ecclesiastical offices, very few positions that women cannot share equally with men it is useful to have the necessary information for entering professions and other fields of work set out in a clear and succinct fashion.

The New Century Library. Edinburgh, London, and New York: Thomas Nelson and Sons. Cloth, 2*s*. net. per volume.—The New Century Library, although somewhat "previous" in its appearance, will certainly be an advantage to the book lover. By the use of India paper the volumes are made very light and small, each volume measuring four and a quarter inches by six and a half inches, and although containing from over 700 to nearly 900 pages being only just over half an inch in thickness including the cover. For all this the type is large—long primer old style—that is to say, two sizes larger than the type of this notice. We have received copies of "Pickwick," "Nicholas Nickleby," and "Vanity Fair." It is of course impossible to combine all advantages, and the only fault that we can find with these beautiful little books is that the extreme thinness of the paper makes the turning over of the pages rather difficult.

JOURNALS.

The Journal of Physiology. Edited by Sir MICHAEL FOSTER, K.C.B., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XXV. No. 2. London: C. J. Clay and Sons. Nov. 28th, 1899. Price 5*s*.—There are five articles comprised in this number. The first article is a continuation by Dr. T. H. Milroy and Dr. J. Malcolm of their researches on the Metabolism of the Nucleins and deals in particular with intracellular metabolism in the granular leucocytes, with a plate. The second article is by Miss Florence Buchanan, B.Sc. Lond., and describes the Efficiency of the Contraction of Veratrinised Muscle. As a result of her experiments Miss Buchanan finds that the absolute tension developed in a veratrinised muscle when responding to a single stimulation is as great as that developed in a normal muscle in response to a succession of rapidly repeated stimuli, and that the maximum tension is maintained for several seconds. The third article is by Dr Phil. Botazzi of Florence on the Action of the Vagus and the Sympathetic on the Œsophagus of the Toad. In this article, which is illustrated by nine figures of tracings in the text, Dr. Botazzi shows that in the toad on stimulation of the common vago-sympathetic trunk the action of the vagus prevails, and he concludes that the vagus and sympathetic nerves act on different materials of each muscular element, and in a different way. The fourth article is by Mr. B. K. Rachford and is devoted to the consideration of the Influence of Bile, of Acids, and of Alkalies on the Proteolytic Action of Pancreatic Juice. Lastly, Mr. H. M. Vernon has determined the Death Temperature of certain Marine Organisms.

DIARIES.

Bale's Dental Surgeon's Daily Diary and Appointment Book for 1900. London: John Bale, Sons, and Danielsson, Limited. Price 7*s*.—This is a convenient-sized diary giving three days upon a page. Each day is divided into portions for one hour from 9 A.M. to 5 P.M. Besides the actual diary the book contains a variety of useful information, such as an almanack, postal regulations, the dental regulations in force for the navy and the army, and lists of odontological societies, dental hospitals and schools, together with details of the metropolitan medical schools.

ROYAL DEVON AND EXETER HOSPITAL.—The inhabitants of Exeter are preparing a testimonial to Sir H. Stafford Northcote who has been appointed Governor of Bombay. He has intimated his wish that this should take the form of an endowment which will benefit the working classes of the city. Consequently it has been decided that £50 shall be allotted to purchasing a casket to contain the deed conferring the freedom of the city of Exeter upon Sir H. Stafford Northcote and that the remainder of the money subscribed shall be invested in the names of trustees for the endowment of a ward to be known as the Northcote Ward of the Royal Devon and Exeter Hospital.

THE LANCET.

LONDON: SATURDAY, DECEMBER 16, 1899.

THE sixty-eighth session of the General Medical Council, extending over seven days, came to an end on Dec. 5th to the great relief of the Council. Several questions were raised at the meeting the just settlement of which would redound to the advantage of the public and the credit of the medical profession. But the most ardent admirer of the Council will admit that it is not great at settling questions. It is very great at postponing them; and it never exercised its masterly faculty of postponement with greater candour or courage than on the occasion of the recent meeting. If our readers will study the working of the Council in connexion with its constitution they will see the ample explanation of its slow action. Most of its members are separated by long distances from London in the interval of sessions and it takes a day or two for them to familiarise themselves with the questions to be discussed. Some of these may be quite new. The majority will be old and even perennial. But with long intervals of six months the old are apt to undergo developments or to assume fresh phases. This explains the loss of a day or two, especially at the beginning of a session. The loss, however, is more apparent than real as most of the members are hard at work in committees putting the questions into such a form that they can be discussed by the General Medical Council. When, at length, the questions have emerged from the committee stage and appear on the programme of business they have to run the gauntlet of discussion by 30 members, of three nationalities, of every variety of temperament, and representing the views and the interests of over 20 examining or educating bodies. Before this emergence has well happened the third day of the session has come, on which it is customary to investigate charges or complaints against registered practitioners, or to receive a report of convictions by Courts of Justice. This investigation generally extends over two or three days. The disciplinary duty of the Council is not over with the disposal of such charges or complaints. It has then to face applications for restoration to the Register by those whose names have been erased, which may raise difficult questions of law and morals. It thus happens that the first four or even six days of the session pass without any of the principal questions which the Council has to settle being reached.

On this occasion it happened so. On the sixth day of the session the Council found itself confronted with 10 or 12 questions of first importance: the recognition of foreign diplomas; the authority of the General Medical Council *versus* that of the examining authorities; the financial position of the Irish Branch Council; the report of the Committee on the prevention of personation by persons seeking registration; the report of the Education Committee on the practicability of raising the standard of the preliminary examination of medical students from that of the junior to the senior grade; the appeal of the Society of Apothecaries of London to the Council to share in the expense of litigation for the settlement of the titles that may be used by their licentiates; the employment of unqualified dispensers; the report on the Companies Act Amendment Bill; the rights of a practitioner who has been erased from the Medical Register; the exemption of foreign applicants for English diplomas from conditions binding on British subjects, and many other matters. With such a formidable list of questions to settle, bristling with difficulties, after the Council had spent five out of its seven or eight available days there seemed to be a disposition to cast about for someone to blame. But the Council cannot make a scapegoat of any individual member. The evils of misused time are due chiefly to the want of better business arrangements, which the able chairman of the Business Committee could correct with a little attention; but they are partly due, too, to the complicated constitution of the Council, which involves every question being looked at from some twenty points of view and partly to the fact that the power of the Council is, after all, moral and recommendatory rather than final and authoritative. Such is the explanation, it may be, of a system of settling questions by postponing them. The system is one which all friends of the Council should wish to see altered.

The most satisfactory piece of work at the recent meeting was the passing of a resolution by the Council approving of the Amended Draft Clauses embodied in the President's report on the steps taken by him to have Section 29 of the Medical Act, 1858, amended so as to secure increased powers for penal and disciplinary purposes. The principal credit of this is certainly due to Sir WILLIAM TURNER who for two or three years has been working at it steadily. By much judgment and by much conciliation he has produced a harmony between the various bodies represented on the Council which it is greatly to be desired may prove an example to the profession in the settlement of other subjects. But this is almost the only question which can really be said to have been settled by the Council. All the other important subjects have been referred to a distant future, some of them with almost transparent disposition to evade the responsibility of decision. This is not a dignified attitude for the General Medical Council, especially on great public questions on which its advice and its coöperation are sought by the Government of the day. If the General Medical Council wishes to acquire more power it must show greater vigour and courage in the use of the power that it already possesses.

AT a time like the present, when our eyes are turned towards the conflict raging in South Africa, no subject can be more apposite than the question of the character of the wounds liable to be inflicted in a modern war. The universal reduction in the diameter of the projectile of recent years was accompanied by so notable an increase in its velocity that predictions as to the lesions likely to result from it were very prone to be erroneous. The experience of the Cuban campaign and of our

Indian frontier wars has taught us much, but much still remains to be learned and some very carefully conducted experiments by Dr. ARTHUR KEITH and Mr. H. M. RIGBY which we published in THE LANCET of Dec. 2nd throw light on this difficult question. It is often asserted that experiments on the cadaver are valueless in showing the lesions which would be produced in the living, and it is certainly to some extent true that the inelastic tissues of a dead body will not react in the same manner as those which have not undergone any post-mortem change; but the article which we have mentioned had for its object the estimation of the *comparative* effects of the chief modern small-bore bullets, and as all the projectiles are subjected equally to the altered conditions the comparative results are trustworthy. The Mark II. bullet, which is being employed in the present campaign, the Dum-dum bullet, the Mark IV. or hollow-nosed bullet, and the Mauser bullet, which the Boers are chiefly using, were those experimented with. The results of the experiments with the Mark II. bullet and the Mauser steel-mantled bullet show that while they both inflict small wounds on the soft parts the Mark II. bullet is more destructive than the Mauser in the proportion of 1·7 to 1. With the Dum-dum and the Mark IV. bullets the destruction is far greater. When the projectile encounters a bone the bone will be destroyed whichever of these four projectiles be employed, though it is hardly necessary to state that the destruction is more widely spread when any of the open-nosed bullets are used. When any modern high-velocity bullet enters a cavity with liquid or semi-liquid contents such as the skull an "explosive" action is manifested, though this is much more noticeable with the Dum-dum or other spreading bullets than with either the Mark II. or the Mauser steel-mantled bullet. The comparative harmfulness of these projectiles having been established the question arises, which should be employed? The answer is, that which accomplishes its object without unnecessary destruction. The object of firing a rifle at a man in a battle is, in the first place, to stop him; and, in the second place, to prevent him resuming his military duties at too early a date. The "stopping" power of a bullet varies chiefly with its diameter and its velocity; it varies, also, according to the racial peculiarities of those against whom it is directed; savage races require much more to stop them in a charge than do civilised races. It is further desirable, though this is of much less importance, that the damage inflicted by the bullet should prevent a return to duty within at least a few weeks. It is impossible to "stop" a charging enemy without injuring him and to use weapons so little harmful that his onward progress is not arrested is, indeed, to "inflict unnecessary injury," for the wound has failed in the object for which it was inflicted. That bullet is, in the end, the most merciful which by the shock of its impact arrests the charge and yet leaves the structures in a condition to be repaired, but no such sharp line can be drawn in practice, and the efficacy of the stopping power must take precedence of other considerations. It is a dreadful necessity which requires us at any time to slay or wound our fellow-men, but if we are convinced of the necessity, then there is no true mercy in doing it inefficiently, in wounding without effecting the object which we have in view. Against a civilised foe we can employ a Mark II. or a Mauser bullet with the knowledge that we are doing as little damage as is consistent with our object in firing at all; but with savage races the bullet must be unprotected at its tip so that it may spread, and for this the Dum-dum bullet is very suitable: it inflicts much less severe injuries than were attributed to it by VON BRUNS, who employed in his experiments a bullet which was not a Dum-dum, for it had much more of the tip uncovered by the casing. With regard to the surgical treatment of these small-bore bullet wounds it may be said that flesh wounds of either the Mark II. or the Mauser steel-mantled bullet will in general heal quickly, but in cases where a bone has been hit amputation will be very frequently necessary. There will be very little scope for brain surgery except in the case of spent bullets.

WE published recently[1] a communication from Dr. HUGH WOODS, honorary secretary of the London and Counties Medical Protection Society, Limited, in which he shows that in August of this year his society approached the Medical Defence Union, Limited, with a view to amalgamation and met with an unqualified repulse. The Council of the London and Counties Medical Protection Society by unanimous vote held that it would be of public advantage if their society amalgamated with the Medical Defence Union. Accordingly, Dr. HUGH WOODS was instructed to make the following offer to the Medical Defence Union:—

"My council are willing to leave the whole terms upon which amalgamation shall be carried out to an arbitrator, say, a barrister of high standing approved of by both societies, or, failing agreement, by the President of the Incorporated Law Society. The arbitrator to have placed before him the whole of the books of both societies, the lists of members, accounts; to examine same and employ an accountant of his own selection for that purpose. The arbitrator then to prepare a scheme for amalgamation, each society undertaking to abide by and carry out the scheme recommended by the arbitrator and bearing equal share of the expenses."

To this offer Dr. A. G. BATEMAN, the general secretary of the Medical Defence Union, replied that the Medical Defence Union

"Having most carefully considered the proposals which your letter contains regret that they are unable to accede to the terms suggested,"

and the answer to our mind is not sufficiently explicit. Its tenour is obvious enough, but no reasons are given for the decision of the Medical Defence Union.

We have always felt that fusion of the two great defence associations of the English medical profession would result in a body capable of doing more than double the good that either of them can do separately—a feeling to which we gave practical proof in 1895 when we offered to place at the disposal of the amalgamated societies, as soon as they should be amalgamated, 100 guineas as an earnest of our belief that a step had been taken for the practical good of the medical profession. We therefore regret the decision to which the Medical Defence Union is stated

[1] THE LANCET, Nov. 4th, 1899, p. 1257.

by Dr. BATEMAN to have come, that they cannot accede to proposals for amalgamation so absolutely fair and above board as those made recently by the London and Counties Medical Protection Society. The question of amalgamation between the two bodies has been on the *tapis* for at least five years and so many thoughtful persons, seeing the value of union between them, have interested themselves in the matter, that the body which is not prepared to respond to the advance of the other body should now make its position very clear. And this the Medical Defence Union fail to do. We do not propose to go through the history of the attempted negotiations. In the second volume of THE LANCET for 1893 there will be found long statements, not always urbane in character, from the gentlemen having charge of the negotiations towards amalgamation which were then being conducted. These negotiations terminated with a distinct rupture—a rupture which caused some strain in the renewal of relations later. This could have been obviated by the display of a little tact and a little forbearance, as anyone will see who will take the trouble to read the communications and ascertain what were the real facts. In 1895 there arose a similar situation. In this year the London and Counties Medical Protection Society and the Medical Defence Union again approached each other with a view to combination, but again were unable to complete their negotiations for reasons which appeared to us to be trivial. In THE LANCET of July 25th, 1896, there will be found statements from Dr. HERON, the honorary treasurer of the London and Counties Medical Protection Society, and Dr. BATEMAN, the general secretary of the Medical Defence Union, giving the point of view of each body, from which it appeared that a question of nomenclature proved an insuperable obstacle. The London and Counties Medical Protection Society insisted that the suggested (and, as we think, very suitable) new title, "The Medical Defence Union, with which is incorporated the London and Counties Medical Protection Society," must be registered in entirety, and we think that the insistance was warranted in every way. Granted that the Medical Defence Union is a well-known title and in Dr. BATEMAN'S own words "a valuable part of the association's goodwill," still it would be necessary that the London and Counties Medical Protection Society should also have their well-known title included or registered as included in the title of the new joint association, for otherwise, and to the endless confusion of the profession, a new society might arise and appropriate the unregistered title "The London and Counties Medical Protection Society, Limited." If the desire of the London and Counties Medical Protection Society to protect their title from possible piracy was in 1895 the only obstacle to union, we consider that the Medical Defence Union took up a position which was trivial as well as illogical, and we said so at that date.

And we cannot commend much more highly the attitude which is now adopted by the Medical Defence Union in refusing the offices of an arbitrator, nor can we really believe that the members of the Medical Defence Union as a body—the members of the profession whose subscriptions support the union—really endorse the action of their officials in brushing aside, without giving any reason for their action, the further proposals that have been tendered to them by the London and Counties Medical Protection Society for fusion. It will be seen that the London and Counties Medical Protection Society now offer to abide by any scheme which shall commend itself to the views of an adequate arbitrator and we are strongly of opinion that the Medical Defence Union should meet them half-way or give very good reasons for taking the ungracious course. We are at a loss to account for their reluctance. The pecuniary positions of the two bodies are absolutely sound, that of the London and Counties Medical Protection Society being, we believe, the stronger of the two inasmuch as they have invested, we understand, the larger sum per member. Again, each society is strongly supported by well-known men in the profession, the London and Counties Medical Protection Society having rather the more imposing roll of names, though names without work do not amount to any great practical support. We mention these facts because it is natural to believe that in so many tentative negotiations it has always been the weaker society in every respect which desired to join the stronger. Each society has more or less the same scope and objects, while each loses members by the separate existence of the other. Of this we are perfectly certain, for our correspondence proves to us that many medical men cannot make up their mind to which body they should belong, therefore they hesitate, fail to see the immediate necessity of belonging to either, and eventually join neither. We trust, therefore, for the good of the profession that the Medical Defence Union will reconsider the proposal for a joint scheme to be decided upon by arbitration made to them this summer by the London and Counties Medical Protection Society. There will be difficulties in drawing up a joint scheme, and any scheme that is adopted by the two societies will have to be endorsed by all the members of both, but we are convinced that this amalgamation ought to take place, and that until it does take place a large number of the medical profession will remain unprotected from libel, blackmail, and legal misfortune. The London and Counties Medical Protection Society have practically said that they will enter upon any joint scheme that seems fair to the mind of an unbiased person calculated to estimate what is fair. To this offer the Medical Defence Union has given no reply except a brief *non possumus*. This ineffectual course is not worthy of a body that has shown itself so energetic and capable as the Medical Defence Union.

Annotations.

"Ne quid nimis."

THE CONDUCT OF SANITARY INSPECTORS IMPUGNED.

SOME very remarkable allegations have recently been made against inspectors who are appointed to collect samples of food under the Food and Drugs Act. The charges appear to have been made first in a book entitled "The Revival of British Agriculture," by Mr. P. Anderson Graham. The *Daily Mail* in its issue dated Dec. 12th, 1899, gives quotations from this work in which it is stated that iniquitous adulteration of milk goes on chiefly in London and is connived at by the sanitary inspectors. When an

inspector wants to find out whether milk is being adulterated or not he is said first to send a post-card to the dairy keeper and then to stroll round. Again, it is stated that certain inspectors make a point of calling on every new man to ask if he is "friendly," "friendly" being interpreted as the payment of two cheques per annum. It is difficult to imagine graver charges in regard to dereliction of duty of a very considerable body of men who in a large measure are responsible for the maintenance of the public health than are contained in these sentences. If these statements are true the condition of things can only be described as scandalous and as constituting bribery and corruption of the most pernicious character. Evidence to the effect that the system of collecting samples is often unsatisfactory may frequently be gathered from between the lines of the annual reports of the Local Government Board, but this has been mainly attributed to the official aspect of the inspector, for when samples are obtained by private purchasers the returns in regard to the rate of adulteration are generally higher. We trust that the Local Government Board will at once take steps to sift this matter to the uttermost degree. Either these charges are true or not true; if the former prove to be the case some fresh organisation will have to be made, while if the latter is the case then the persons responsible for the statements must meet the consequences of making charges which are not justified.

PROPRIETARY v. OFFICIAL PREPARATIONS.

A CORRESPONDENT draws attention to the real or supposed dangers of the frequency with which proprietary preparations are prescribed in lieu of the equivalents of the British Pharmacopœia. He says that wherever the fashionable physician goes he finds such preparations are taken by patients with as little hesitation as they take their meals. He considers this ruinous to the interests of the medical man, the dispensing chemist, and the patient. It is of course possible to argue that the interests of the medical man and the dispensing chemist suffer from the frequency with which the laity attempt to treat slight ailments without skilled assistance; but this natural tendency of every man to attempt to be his own medical adviser commonly entails subsequent prolonged medical attendance owing to an initial error of diagnosis. In other words, it might be argued, from interested motives, that proprietary preparations are blessings in disguise, a contention which we should deem unworthy of any professional man. It is perfectly true that many of the advertised preparations cannot in ignorance be used with impunity, and it is the duty of every practitioner to speak with no uncertain voice of the possible dangers of self-medication. On the other hand, it is probable that the growth of the use of such proprietary preparations by medical men was in the past fostered by the difficulty of remembering the pharmacopœial doses, a difficulty which was evaded by employing proprietary articles. Careful consideration of the current British Pharmacopœia will show that this hindrance to the employment of official preparations has to a large extent been removed, and that pharmacopœial drugs can now be prescribed with as much facility as proprietary articles. Whether the average dispensing chemist can compete with the wholesale manufacturer in rendering the results of his labour equally attractive in appearance scarcely concerns the prescriber. It can undoubtedly be done by a skilfully trained pharmaceutist; it is for him to determine what profit accrues from the trouble involved. So far as the benefit of the patient is concerned it appears to be the duty of the prescriber to order the remedy demanded by the nature of the complaint and to indicate the form in which it is to be dispensed and, provided that the drugs supplied by the chemist are of the pharmacopœial standard of purity, the prescriber should be perfectly indifferent as to whether the actual preparation sent to his patient is proprietary or official. A prescription which indicates the name of a maker is necessarily an advertisement.

ROENTGEN RAYS AND FORENSIC MEDICINE.

EVERYBODY knows that a photograph may be easily made to tell untruths and that a like unstable veracity may attach to skiagrams is clearly pointed out in an article in the *Minneapolis Times* quoted by the *Literary Digest* of New York. The matter has an important bearing on forensic medicine, and we therefore reproduce the paragraph:—

A Chicago electrical specialist has been making some interesting experiments at the suggestion of the attorneys of the Chicago City Railway Company and others, and the results are somewhat startling. They tend to show that shadowgraphs may need a great deal of corroboration when introduced as evidence in a damage suit. One of the lawyers exposed his hand before the machine with the muscles relaxed, fingers extended, and the member generally in normal position. The shadowgraph showed the bones to be in perfect condition. The attorney then made a second exposure of the same hand, cramping the first joints of the fingers slightly. The ends of the fingers appeared to have been crushed and the bones were apparently of unnatural size. In another experiment the operator showed that it is possible to arrange an object on the outside of the body and make it appear to be lodged within. Thus a bullet placed in the clothing on the back of the body was shown in the shadowgraph as resting against the spine. The expert stated further that he had learned by long experience that it is possible for the operator himself to be deceived as to the location of an object disclosed by the x-ray machine.

THE ST. JOHN AMBULANCE BRIGADE AND THE WAR.

THE St. John Ambulance Brigade was established by the Order of the Hospital of St. John of Jerusalem in England about 12 years ago, being an offshoot of the St. John Ambulance Association. Its main object was to provide organised first aid on public occasions, but it was also intended that its members should be invited to volunteer to supplement the medical *personnel* of the army if required in case of national emergency. The good work voluntarily done by the members of the various units called "divisions" which are to be found in most of the principal cities and towns throughout the country is now pretty well known, and wherever divisions exist their presence on occasions when large crowds are assembled and when accidents are likely to occur, as at cycle races, football matches, and so forth, is always highly appreciated; but until the outbreak of the present war the brigade has had no opportunity of proving its value and preparedness to act as an auxiliary to the Army Medical Service. As much confusion exists in the public mind as to the exact distinction between the St. John Ambulance Association and the St. John Ambulance Brigade it may be stated briefly that the association is chiefly concerned with the manufacture and distribution of ambulance material, such as ambulance waggons, stretchers, surgical haversacks, splints, and bandages, and provides for the instruction and examination of classes in first aid, nursing, and hygiene, and the granting of certificates of proficiency. Persons who have obtained the association certificate are alone allowed to enter the brigade under certain conditions, the principal being that they shall attend at least 12 drills and practices yearly, shall pass an annual re-examination in first aid under the medical officers of the brigade and shall be ready to turn out for public duty whenever called upon by their officers. The total number of members of the brigade in England, Ireland, Wales, and the colonies is now about 11,000, including nearly 2000 nursing

sisters. The first call on the brigade for volunteers during the present war was received from the War Office on Nov. 3rd and within 10 days 23 picked men were assembled at headquarters in London at St. John's-gate, the seat of the Order of St. John of Jerusalem, fully equipped with the brigade uniform, as well as with khaki and serge suits, underclothing, and complete sea kits. On Nov. 21st these men embarked on the *Princess of Wales* hospital ship, of which they form two-thirds of the hospital staff. The next call for 55 men was received on Nov. 20th, and on the 22nd the volunteers selected from all parts of the kingdom were assembled at headquarters ready for embarcation. This detachment sailed in the *Simla* on the 25th, being intended for work in the base hospitals in South Africa. On Nov. 29th 28 men were requisitioned to man the Duke of Portland's Hospital, and on Dec. 4th the selected men were at headquarters fully equipped and they sailed on Dec. 13th in the *Majestic*. While on service these men will be under the orders of officers of the Royal Army Medical Corps and will receive pay at the same rates as the *personnel* of that corps. Each man provides his own outfit of underclothing and brigade uniform, the khaki suits and field or sea kit being paid for by the St. John Ambulance Association, or in the case of the 28 men by the Portland Hospital Committee. When it is known that the members of the brigade are, almost without exception, men who are earning good salaries or wages, and that they voluntarily accept service under the War Office at rates which in many cases represent only about half of the amount they temporarily forego, it will be seen that the brigade has good cause to be proud of the patriotic spirit evinced by its members. It is further to be noted that the number of men so far selected represents but a small proportion of the members of the brigade who have volunteered for the service. It is understood that the War Office will probably call for still larger numbers of men of the brigade, who, it should be noted, are trained in the army stretcher drill, so that they can, without further instruction, work with the men of the Royal Army Medical Corps. It should be added that very considerable numbers of the nursing sisters of the brigade have volunteered for service in South Africa but owing to the Army Nursing Reserve being more than equal to meet the requirements of the public service the War Office has not found it necessary to call for volunteers from the nursing divisions of the brigade.

THE BIRMINGHAM UNIVERSITY AND ITS REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL.

AMONG many interesting questions raised by the creation of the University of Birmingham is that of its representative on the General Medical Council. At this early stage, before even the charter is actually granted, a sharp difference of opinion has been developed in Birmingham as to the mode of election of this important official, for we assume that this University, like all the other universities of the United Kingdom, will have, for the present at least, its individual representative on the General Medical Council. The view of the council of the Mason University College is that the council of the University should have the power of electing the representative. And this view has already been expressed in a draft Bill. The council suggest that any discussion of this point should be postponed till after the sealing of the charter which cannot be till after Easter. The University council consists of about 27 persons, including the Chancellor, the Vice-Chancellor, and the Pro-Vice-Chancellor, who are not yet elected. The 24 members already chosen include only four members of the medical profession. These four members are James Gibbs Blake, B.A., M.D. Lond.; Professor R. Saundby, M.D. Edin., F.R.C.P. Lond.; Professor B. C. A. Windle, M.A., M.D Dub.; and Professor E. Rickards, M.A., M.B. Oxon., F.R.C.P. Lond., F.R.C.S. Eng. The other members include many local manufacturers and doubtless liberal and municipal supporters of the new institution of which Birmingham is naturally proud. According to another view the representative of the University should be chosen by its medical professors and the medical graduates of the University. This view is advocated in the *Birmingham Daily Gazette* by Dr. E. D. Kirby. He complains that the medical profession at large is badly represented on the General Medical Council, though all its funds are obtained from the members of the profession. In other words, Dr. Kirby raises over the foundation-stone of this new University the whole question of the Direct Representation of the profession. We are not quite convinced of the wisdom of this course. A university is nothing if it is not a meeting ground for all the faculties of which it is composed and if its appointments do not in some way represent and reflect the views and the choice of all these faculties. In that it differs from a medical corporation. We assume that the medical graduates in this as in all other universities will be a very potent faculty, whose views in the long run will secure the election of men having their confidence; in other words, that they will lead the Convocation in the determination of medical questions and in the selection of the representative on the General Medical Council. But at present there are no medical graduates to choose the representative. In a few years there will probably be a good number of such graduates who will make their views felt in the election of a representative. Meantime we should rather advise the friends of Direct Representation to raise no controversy at this stage of the movement, but to leave to the council of the new University for a certain number of years the appointment in question. Any other course would appear ungracious and would have no chance of success. Thereafter the appointment should rest with Convocation, as it does in Oxford and Cambridge and Durham. The friends of direct representation are entitled to claim that in the final constitution of the University its medical graduates should have a powerful voice in this appointment. But for the present such graduates do not exist and we should leave the selection with grace to the council which represents the liberal promoters of the new University.

LONG PERIODS OF FEVER IN LYMPHADENOMA.

IN the *American Journal of the Medical Sciences* for October Dr. C. Wilson and Dr. Simon Flexner have reported a case of Hodgkin's disease showing long periods of fever. The temperature for some time resembled that of typhoid fever and only occasionally was intermittent. A man, aged 38 years, came under observation in March, 1896. He had always enjoyed good health until 1892, when he noticed enlargement of the left cervical glands. Fever and loss of strength and flesh soon followed. The glands rapidly enlarged and caused great inconvenience in swallowing and breathing. He spent the winter of 1893–94 in Florida and was much benefited; the fever disappeared and the glands diminished. But on returning home the symptoms returned. He again spent the next winter in Florida, but was less benefited; he recovered considerable strength, and the glands again subsided. In the following summer he had febrile periods with less enlargement of the glands. The patient's appetite was always good. When seen on March 31st, 1896, he had had pyrexia for about two weeks, the temperature ranging from 99° to 103° F. He was greatly emaciated, had severe headache, and was a little confused in his mind. His colour and appetite were good. There were three or four glands on the left side of

the neck and two on the right side, as large as almonds. The axillary and inguinal glands were not enlarged. The spleen was felt; it extended two inches below the ribs. The temperature was 103° and the pulse was 74. The fever continued through April, and the temperature never reached normal until May 1st. Cold sponge baths made the patient comfortable. After the fever had disappeared he gained much flesh and strength. On May 19th the temperature rose to 103°; during the remainder of the month it ranged between about 102° in the evening and normal in the morning. In June and July the temperature reached about 103° with a daily oscillation of from 2° to 3°. On June 1st slight bronzing of the forehead, chest, and abdomen was noticed. In August the temperature was about 102° with a similar daily range. On the 25th the pyrexia disappeared. It re-appeared on Sept. 30th and continued in its previous form, reaching at times more than 104°, until Nov. 27th when it again became normal. He had been getting weaker and he died on Dec. 4th. On August 3rd the abdomen was distended with a milky fluid, about a gallon of which was withdrawn on tapping. The operation had to be repeated on August 25th and Nov. 19th. Only a partial necropsy was permitted. Dr. Flexner reported that some of the microscopical appearances were suggestive of lympho-sarcoma but he did not doubt the diagnosis of Hodgkin's disease, of which the clinical picture was conclusive evidence.

FOREIGN MEDICAL MEN IN CUBA.

AS has been already stated in the columns of THE LANCET, a law was passed in Cuba last June requiring all foreign medical men wishing to practise to produce their diplomas to the Secretary of Public Instruction, to pay a fee of 35 dollars, and to submit to an examination consisting of a three hours' theoretical exercise, a clinical and operative test, and a five hours' extempore essay on a subject proposed by the examiners. This examination, according to the *Archivos de la Policlinica* (Havana) is somewhat severe—indeed too much so, as the prospect of having to undergo it seems to have frightened away some foreigners who might have been desirable additions to the medical staff of the country where medical education is not in so advanced a condition as in France and Germany and where there is by no means such an excessive number of practitioners as in those countries. The fact, however, is, it appears, that this law exists mainly on paper, for numbers of foreign medical men have put up their plates without interference. What is far worse, too, there are plenty of quacks who ply their trade merrily enough. The *Archivos de la Policlinica* remarks that in some American states even now the recognition of a foreign diploma is very simple and that even in New York as lately as 1891 no examination was required, so that in a "new" country like Cuba there could be no serious objection to allowing foreign practitioners freely to exercise their calling even without insisting on an examination.

THE CRYPT OF ST. GEORGE-THE-MARTYR, SOUTHWARK.

IN our previous references to the removal of the decomposing human remains which were formerly in the crypt of the church of St. George-the-Martyr, Southwark, we omitted to mention the pioneer work done in the matter by the *Public Health Engineer*. Our attention has been called to the fact that in the issue of our contemporary dated April 23rd, 1898, an analysis was published of the air in the church, this being certainly the first step towards the results which have since been realised. Samples of the air of the building were taken immediately after morning service on Sunday, April 17th, and two samples gave respectively 20·2 and 20·1 volumes of carbonic acid per 10,000 volumes of air, while the normal proportion in a well-ventilated room is generally received at about six volumes per 10,000. The congregation numbered only 200. The analysis was freely quoted in the daily press and was made by Mr. J. A. Wanklyn and Mr. W. J. Cooper who were specially commissioned by the *Public Health Engineer* to make it. This fact had escaped our attention. Despite the local vestry, whose sanitary views were peculiar and peculiarly expressed, the crypt was, as our readers know, cleared, and we have much pleasure in saying that much of the credit for this was due to the *Public Health Engineer's* early direction of public attention to the matter. The analysis of the air in the church was the sharpest weapon that came into Dr. Waldo's hands in his onslaught upon the supine authorities.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual meeting of the Metropolitan Hospital Sunday Fund was held at the Mansion House on Dec. 13th when the Lord Mayor, the Right Hon. Alfred James Newton, President and Treasurer of the Fund, presided. In the absence of Sir Sydney Waterlow the adoption of the report, which was unanimously agreed to, was moved by Sir Savile Crossley and seconded by Canon Fleming. The report stated that—

The twenty-seventh year of collecting this Fund has resulted, under the presidency of the Right Honourable Sir John Voce Moore, Lord Mayor, treasurer, in a total of £53,604 11s. 1d.

The grand total of the Fund has now reached over one million sterling (£1,009,638 5s. 0d.). The council desire to take this opportunity of warmly congratulating Sir Sydney Waterlow, in whose mayoralty the fund was inaugurated, and who has ever since taken the leading part in its management, on seeing his hope realised, that this amount would be raised as it has been this year. The average annual receipts since the Fund was established amount to £37,394 0s. 3d.

The Rev. Prebendary C. J. Ridgeway, M.A., of Christ Church, Lancaster-gate, heads the list of contributors with £1375; the Rev. Canon Fleming, B.D., of St. Machael's, Chester-square, collected £1341; the Rev. J. A. Storrs, M.A., of St. Peter's, Eaton-square, £1081; and the Rev. Prebendary Eardley Wilmot, M.A., of St. Jude's, South Kensington, £742. There is a satisfactory increase this year of £1661 from congregational collections. 12 more congregations have collected this year. George Herring, Esq., sent the munificent donation of £10,000. 1000 guineas was received from J. Lane Densham, Esq.; Sir Savile Crossley, Bart., again most generously contributed £500, and sent a like sum of £500 to the Prince of Wales's Hospital Fund; and "Delta" sent his twenty-first donation of £200.

The Committee of Distribution recommend awards to 192 institutions, being four more than last year. The amount collected this year, including ¾ interest from the Court of Chancery, amounts to £50,716, and the committee anticipate a further £2000 before the accounts are closed on Oct. 31st. The distribution of £50,500 to the 138 hospitals, &c., and to the 54 dispensaries is now recommended.

This year 195 institutions have made applications for grants from the Funds at your disposal. Of this number it was found necessary to invite the attendance of deputations from the governing bodies of 18. Your committee are not able to recommend any awards in three cases. Deputations from 12 hospitals and from two dispensaries conferred with your committee. Explanations modifying the causes of adverse criticism were given in several cases and the awards are as now recommended.

In addition to the £50,500 recommended for distribution 5 per cent. of the total sum collected—viz., about £2500—is set apart to purchase surgical appliances.

Statistics have been prepared as usual showing an analysis of the number of beds in hospitals, the cost of patients both at hospitals and dispensaries, the proportionate expense of management, as well as other valuable information, and copies are sent to every member of the Council.

The amount available for distribution is larger than that distributed last year owing to the munificent donation of £10,000 from Mr. George Herring. The collections on Hospital Sunday are generally larger than those of last year and show that the confidence of the public in the Metropolitan Hospital Sunday Fund is well sustained.

The working expenses, including rent of offices, for 1899 are £1702 4s. 11d., as compared with the average expenditure of £1644 4s. 4d. during 26 previous years, and are 3·181 per cent. of the gross receipts. The average percentage of working expenses for 27 years is 3·520. The offices are in connexion with the Mansion House at 18, Queen Victoria-street, E.C.

The Council for the year 1899 was re-elected with the Earl of Meath, Sir Trevor Lawrence, Mr. Alderman Bell, and Mr. J. R. Cooper to fill vacancies, and June 24th was fixed for Hospital Sunday 1900. Archdeacon Sinclair, in inviting the coöperation of all ministers of religion within the metropolis to renew their efforts on behalf of the Fund, alluded to the work of THE LANCET and the *Hospital* in issuing a specially prepared supplement each year. It was satisfactory to hear from Sir Savile Crossley that the Prince of Wales's Hospital Fund had in

no way done harm to either the Metropolitan Hospital Sunday Fund or the Hospital Saturday Fund, but, on the contrary, by more widely calling attention to the needs of hospitals had benefited both those older funds. In the course of the proceedings the Lord Mayor announced a legacy of £1090 by the late Mr. Thomas King of Tisbury. The fact that the meeting lasted little more than half an hour was evidence, as the Lord Mayor pointed ont, of the business-like methods of the Fund.

STREET NUISANCES.

ON Dec. 12th the Local Government and Taxation Committee of the London County Council laid before that body some proposed by-laws dealing with window cleaning and "flash light" advertisements. Owing to the pressure of business the passing or rejection of the by-laws was deferred until the next meeting of the council on Dec. 19th. We earnestly hope that the by-laws will pass, for they deal stringently with the dangers incident to both matters.

THE APOTHECARIES' HALL OF IRELAND AND THE GENERAL MEDICAL COUNCIL.

AT a special meeting of the Apothecaries' Hall of Ireland held on Dec. 8th, 1899, it was proposed by Dr. Adye-Curran and seconded by Dr. Evans:—

"That the observations with reference to this body made by Dr. Atthill at the General Medical Council in London be considered most unprofessional, totally uncalled for, and highly discreditable to the Representative of the Royal College of Physicians of Ireland."

The motion was passed unanimously.

POISONING BY MERCURIAL INJECTIONS.

THOUGH numerous authorities recommend mercurial injections in the treatment of syphilis and though the practice has now become extensive any advantages over established methods still remain to be proved. Successful results have been recorded on all sides, but in what more successful than with other methods of treatment is a question scarcely considered. Indeed, the same holds true of most of the new drugs and new methods which deluge therapeutics. Furthermore, mercurial injections have a distinct disadvantage over ordinary methods of treatment. An element of danger is introduced and in several cases fatal results have ensued. This fact is not so well known as it should be, possibly because most of the cases have occurred on the continent. At the meeting of the Société Médicale des Hôpitaux of Paris on Nov. 17th MM. Gaucher and J. Noel read notes of the following case in which death followed injections of calomel. A man, aged 50 years, had paraplegic symptoms apparently of alcoholic origin, but which were treated by a practitioner as syphilitic. Iodide of potassium was given and Vigier's preparation of calomel (which contains five centigrammes to the cubic centimetre) was injected. The first injection was given on June 26th, the second on July 1st, and the third on July 6th. In all 15 centigrammes of calomel were injected. No improvement resulted. In the middle of September the patient was able to move about on crutches. About Oct. 15th he began to complain of digestive troubles. On the 20th he had severe itching all over the body and several red patches like those of urticaria appeared on the forehead. The liver was painful and extended three fingers' breadth below the ribs. On the 21st the face was covered with a rubeoliform eruption and there were sanguineous diarrhœa and vomiting. The eruption appeared over the whole body. There were hebetude, scarcely perceptible pulse, incessant vomiting, ptyalism, fœtid breath, and swollen tongue and gums. He died on the 29th. MM. Gaucher and Noel insisted that no other diagnosis than mercurial poisoning was possible. They explained the long interval—nearly four months—between the injections and the production of symptoms by the fact that insoluble mercurial salts remain for a time encysted in the tissues and inert and then suddenly become dissolved. This is precisely the danger of calomel injections. Injections of soluble salts were recommended instead because the effects could be easily watched. In the discussion which followed M. Merklen and others pointed out that an interval of three or four weeks had been observed between the injection of calomel and the production of symptoms ("*stomatite mercurielle tardive*"). That a dose so small as 15 centigrammes (two and a quarter grains) should prove fatal was explained by the ill-health of the patient.

UNIVERSITY OF CAMBRIDGE: LONG VACATION COURSE.

THIS year the classes in pathology and bacteriology will be carried on as usual, but will be supplemented by instruction in methods of diagnosis used in the ward and in the out-patient departments. We are informed that the classes are announced early this year, as the last long vacation course was somewhat interfered with by a statement that found currency that it would not be held. Altogether the arrangements will be much more complete, and the work will cover considerably more ground than was possible during the last course.

THE WORKMEN'S COMPENSATION ACT.

IN THE LANCET of Sept. 30th we published an important article by Mr. Albert Benthall dealing with some points in the working of the above Act. From the point of view of the medical profession the salient point of the paper was that dealing with the question of medical referees. "The Act," said Mr. Benthall, "with a great originality, contemplated that in all cases of dispute as to the medical points of a claim any committee, arbitrator, or judge should have the services of a State-appointed medical referee to report on any matter that seemed material to the question. ....." Unfortunately, continued Mr. Benthall, the use of the word "may" instead of "shall" in the clause has rendered the whole machinery of the Act with regard to medical referees practically a dead letter. Mr. Benthall concluded by suggesting that the medical referees should be called "assessors" and should sit with the arbitrator or judge to advise him on the medical points of the case, as do the assessors with the judge in the Wreck Commissioner's Court. A correspondent writing to us *apropos* of Mr. Benthall's paper —and who, we may say, is not a referee under the Act—tells us the following story. Recently after giving evidence in a county court case he came back to town in company with the counsel for both defendant and plaintiff, to each of whom he was known. These legal gentlemen pointed out that in their opinion the profession would not be satisfied with the judgments of the present medical referees, for they are generally in practice in the neighbourhood, not as consultants, but as general practitioners in opposition to those on whose opinions they have to give judgment. Our correspondent adds that he has heard from various medical men that a professional opponent has made capital out of the fact that he is a medical referee and, moreover, that many medical men who are referees under the Act, finding no particular work under the Act, are acting for solicitors whose practice lies in taking up workmen's claims. These medical men may override the opinions of other practitioners in the district on the strength of being medical referees. To return to the opinions of the barristers alluded to above, they considered that medical assessors should be appointed who should be consultants, that a medical certificate should be sent with notice of claim,

and that such certificate should be paid for, not by the claimant, but by the Home Office. The whole matter is one of considerable difficulty, and we shall recur to it.

SANITARY PRECAUTIONS IN POPLAR.

MR. F. W. ALEXANDER, the energetic medical officer of health of Poplar, has issued a notice to the medical practitioners of Poplar and its immediate neighbourhood pointing out that it is most desirable that special attention should be paid to all persons arriving from Portuguese ports who may be brought under their attention in any stages of illness, but especially in early stages. Directions accompany this circular for obtaining and sending material for bacteriological examination and a reminder is added that cases of plague will be received into the Metropolitan Asylums Board hospitals upon the forwarding of a certificate, as are other infectious diseases. Plague will be made a notifiable disease from the commencement of the year 1900. Mr. Alexander has also caused to be distributed among lodging-house keepers postcards to be filled up and sent to him giving notice of any lodger from suspicious ships. We are glad to see that the Poplar Board of Works have, upon the recommendation of the medical officer of health, passed the following resolution:—

"That the various sanitary authorities in London be asked to point out to importers and wholesale dealers in condensed milk in their districts the desirability of having bad condensed milk destroyed or removed by the local authority as trade refuse to prevent the possibility of its being sold for the purposes of human food."

If the importers and wholesale dealers honestly carried out these recommendations—and we think that in most cases, if not all, that they would—the business of scoundrels like Daley and others upon whose conduct we have commented would rightfully suffer.

THE ROYAL BERKSHIRE HOSPITAL.

THIS eminently useful institution having reached the sixtieth year of its age has unfortunately fallen upon evil times as regards its finances. The annual expenditure exceeded the income by some £1500 and hence it was felt that a special effort must be made. The Chairman, Lord Wantage, had the pleasure of raising £6000 by a personal appeal which he made to Berkshire and the surrounding counties, but more remained to be done, so a festival banquet was organised by Major Thoyts, the senior vice-president of the hospital. The banquet took place upon Dec. 5th under the presidency of H.R.H. Prince Christian. About 150 persons sat down. The President, in proposing the toast of "The Queen," announced that Her Majesty had given £25 as a special donation to the funds of the hospital. Sir A. D. Hayter, in proposing "The Navy, Army, and Reserve Forces," made a feeling reference to the presence of the son of the President at the front, and then Mayor Thoyts referred to the financial position of the hospital. They required, he said, an additional £1500 a year to put them on a sound financial basis. Mr. E. H. Simmons then announced that Lord Wantage's appeal had raised £6000 in donations and £270 in increased annual subscriptions, while the proceeds of the dinner amounted to £6144 18*s.* 6*d.* in donations and new or increased subscriptions to the amount of £450 6*s.*, being a grand total of about £12,865. This, we think, is a very generous response and the stewards and Lord Wantage are to be greatly congratulated. A county hospital is an institution which if well conducted is of inestimable value, and the Royal Berkshire Hospital does excellent work. In this connexion we may mention that we have just received the report for 1898-1899 of the Reading Pathological Society, which dates from 1841. The resident medical officers of the hospital for the time being are *ex-officio* members of the society. Meetings are held every month with the exception of August, and at the annual meeting an oration is delivered by some leader of the profession. This year the orator was Dr. J. F. Goodhart who chose for his subject Uric Acid.

TABES DORSALIS.

C. L. DANA[1] considers that tabes dorsalis is a primary atrophy or disease of the neuron, and not the result of a spinal meningitis. As a fact meningitis is not always present, and even when present it cannot be made to explain such phenomena as the Argyll-Robertson pupil. He maintains that acquired syphilis is the chief morbid factor in the production of tabes, and that among the accessory causes are neuropathic heredity and overstrain of the spinal cord by indulgence in excessive muscular exercise, &c. After referring to the usual symptoms of the pupil, knee-jerk, &c., he discusses the less usual methods of onset, which occur in 10 per cent. of cases, and among these he mentions such phenomena as rectal, neuralgic, laryngeal, and gastric crises, optic atrophy and arthropathies, and manifestations of secondary syphilis which gradually merge into tabes. Among early symptoms of importance are areas of anæsthesia and analgesia, the latter being among the earliest. Such areas of anæsthesia are found on careful examination, and their position and distribution have already been minutely studied and recorded by Muskens. The symptom of Biernacki, or cubital analgesia,[2] a phenomenon which is of frequent occurrence in general paralysis of the insane, is also met with in tabes dorsalis. There is also a lack of sensitiveness to pressure on the popliteal nerves. The abdominal reflexes are present when the knee-jerk is absent, and the existence of ataxia revealed by extreme tests—e.g., standing on the toes—is another early feature of note. For treatment Dana recommends mercury and iodide of potassium in cases with a syphilitic history, alternating with tonics in the form of iron and phospates and strychnine. A more strictly tonic treatment is recommended in non-syphilitic cases. Dana has also obtained good results by the use of Fraenkel's method of treatment. He thinks that tabes dorsalis is distinctly amenable to treatment and that it is sometimes arrested and very often relieved.

OUTBREAKS OF FIRE IN COLD WEATHER.

A VERY remarkable succession of destructive fires occurred in the metropolis at the latter end of last week and in the early days of this week. Close on midnight on Friday, Dec. 8th, the printing and other machinery of THE LANCET, which had not yet completed the week's issue, was involved and considerable damage was done, a large portion of the issue being destroyed. This fire, near the Strand, was of serious magnitude and was followed on Saturday by an enormous conflagration near King's-cross in which several large timber-yards were destroyed. Further fires hardly less in magnitude occurred on the following Sunday and Monday and at one time the whole force of the Metropolitan Fire Brigade was in action. It surely is remarkable that these fires should have occurred within a few hours of each other, the first having started at a time exactly coincident with the onset of a "snap" of very cold weather when dry, keen easterly winds and frost commenced. At the time of going to press we learn that over 80 alarms occurred in London in four days. We believe that this is not the first time that this curious relation of cold weather to the outbreak of an epidemic

[1] Medical Record, Nov. 1st, 1899.
[2] THE LANCET, March 18th, 1899, p. 783.

of fire has been noticed and it would be interesting to consult the records of the fire brigade during past years to see whether this definite relation may be adduced from the evidence of experience. If so—and we should not be surprised to find that it is so—it remains to seek an explanation. There are one or two factors which occur to us which may play an important part in rendering the outbreak of fires more probable on the onset of a cold dry season than at other times. First may be placed the increased use of appliances for domestic heating with therefore correspondingly increased chances of material being ignited. While this is so it must be remembered also that the onset of keen dry air tends to render combustible material more inflammable by making it drier. Further, the absence of moisture in air undoubtedly favours the progress of combustion and the specific heat of dry air compared with moist air is comparatively speaking *nil*. Again, moisture is a diluent, so to speak, playing no part in combustion. It is a matter of common observation that the glowing end of a recently extinguished wooden match continues to glow more brightly and for a longer time in keen dry air than in warm moist air, resembling in this respect the old experiment of dipping the glowing end into oxygen. This cannot be explained by assuming that the air contains any greater percentage of oxygen, although relatively the quantity of oxygen must be greater in cold dry air because of its increased density compared with warm air. Whatever may be the explanation it is certainly remarkable that big outbreaks of fire so often occur simultaneously with the advent of cold dry easterly winds.

THE following paragraph from the *St. Petersburger Medicinische Wochenschrift* of NOV. 6th is interesting in view of the way in which our country is treated by the general continental press:—

"..... Sir James Sivewright has at his own expense fitted out an ambulance, which is to be conveyed free of charge to South Africa by an English steamship company, in order to provide medical aid for wounded Boers in Pretoria. This fact seems to us under the present circumstances to be proof of an enviable freedom of action which would be hard to find in any other country than much-abused England."

IT has been pointed out to us by a correspondent that in our article headed "Exhumation in Criminal Cases" (THE LANCET, Dec. 2nd, 1899, p. 1533) we were in error in saying that no inquest was held upon the victim of the Wortham murder. As a matter of fact we find that an inquest was held and adjourned once or twice, but no formal order was given by the coroner for a post-mortem examination.

THE evening meeting of the Royal Meteorological Society to be held at 25, Great George-street, Westminster, S.W., on Wednesday next, Dec. 20th, at 7 30 P.M., should be of particular interest to medical men, as the paper announced to be read by Mr. Baldwin Latham has for its subject the Climatic Conditions necessary for the Propagation and Spread of Plague.

THE Queen has been graciously pleased to sanction the following appointments to the Order of the Hospital of St. John of Jerusalem in England:—Surgeon-General William Taylor, C.B., A.M.S., from Honorary Associate to Knight of Grace; and Robert Charles Brown, M.B., M.R.C.P. Lond., F.R.C.S. Eng., to be an Esquire.

THE National Association for the Prevention of Tuberculosis have decided to hold a congress in London and the Prince of Wales, in accepting the Presidency, has expressed his intention of opening it in person. The spring of 1901 has been fixed upon as an approximate date.

THE Council of King's College, London, have appointed Professor N. I. C. Tirard, M.D. Lond., to the chair of Medicine, vacant by the resignation of Professor I. Burney Yeo, M.D. Lond.; and Dr. W. A. Turner to be an assistant physician at King's College Hospital.

THE portrait of Dr. W. J. Collins, chairman of the London County Council in the Jubilee year, 1897, which was presented to him by 103 of his colleagues, has been placed the lobby of the Council Hall, Spring-gardens.

PROFESSOR OGSTON is proceeding to South Africa. We are informed that he goes as a private individual at his own charges and not, as has been reported, at Royal request.

THE WAR IN SOUTH AFRICA.

WHAT has recently happened in South Africa is mainly of military and not of medical service import. But the articles which we are publishing from our correspondents at the seat of war are distinctly interesting in that they relate to the current medical history of the campaign and describe the nature of the wounds and the very favourable progress of the wounded, together with a clear and eminently satisfactory account of the administration of our army hospitals. The reverse that has befallen General Gatacre is greatly to be regretted, more on account of its possible political and moral influence than on the score of its military importance. The defeat of General Gatacre's force with the loss of over 600 officers and men under his command is in itself no doubt very unfortunate, still the loss can soon be filled up and the defeat of a relatively small and detached force will have no real effect on the military operations of the war, but its influence at the present time on a wavering and disaffected population may be considerable. On the other hand, we regard it as of excellent omen that we are kept quite ignorant of Sir Redvers Buller's strategical plans. It goes without saying that General Buller is maturing his designs for the relief of Ladysmith and that he will not set about the work until he has completed his arrangements; in the meantime it is quite futile for people in this country to speculate on these points seeing that we are ignorant of the amount of the transport he has at his disposal and quite in the dark as to the strength and disposition of the Boer forces that will oppose him. We may be sure, however, that the latter occupy a strong natural position in the vicinity of the Tugela river which they have lost no opportunity of strengthening to the best of their ability. In General Gatacre's retreat, as on so many other occasions in the present war, the artillery have played a very prominent part and acquitted themselves admirably, while the discipline and courage of our troops have throughout been conspicuous. It seems certain that one of the results of this war will be to strengthen greatly the artillery arm of the service and to increase the cavalry. To the non-military mind it appears to be somewhat inexplicable that with the very high state of efficiency of our batteries of artillery a larger number of batteries were not sent out earlier than they were to South Africa, and also that the artillery do not seem to have had anything like the number of field howitzers that were needed. We are altogether opposed on principle to the carping criticism of the amateur generals to be so often encountered in this country, but practical men of business are nevertheless quite able to appreciate and discuss questions of War Office administration. Military officers and war correspondents never fail to point out any real or alleged shortcomings on the part of an army medical service and we may feel assured that an insufficient number of field hospitals or an inadequate organisation or provision of medical supplies would be promptly, and sometimes unjustly in our opinion, subjected to adverse criticism. It follows, therefore, that purely military authorities and officers must also expect

to be subjected to a similar process of questioning and criticism. We may call attention to a leading article in the present number of THE LANCET on bullet wounds and the relative effects of the modern projectiles used in war. The number of wounded in our war hospitals at the Cape is already considerable, but the total casualties up to the present time have not really been large when the total strength of the British force in South Africa and the amount of fighting that has occurred there are taken into account. According to the latest returns there are nearly 74,000 men of the regular army in the field, 1100 men of the Royal Navy, and nearly 16,000 men belonging to the colonial forces, to say nothing of the troops now on passage or under orders to embark. The transport of such an enormous force to South Africa in so short a time has unquestionably been a very great feat. A good deal has been said about the possession and transport on the part of the Boers of heavy guns of position, and it is certainly a remarkable circumstance that they should have been able to accomplish this, but from a medical service point of view we question whether the results from the presence of these guns in the field have repaid the labour of getting them there. The total casualties in Ladysmith from shells during the siege up to Dec. 5th only amounted to 10 killed and 79 wounded. If the campaign in South Africa is a hard one from a purely military standpoint it is indubitably a most difficult and trying one for medical officers and for all connected with the field hospital service. It is only fair to say that the Government and the War Office Authorities are to be congratulated on having risen to the occasion and done their best to provide for the requirements of the Army Medical Service on a large and liberal scale. Their labours have been so largely supplemented and aided by Red Cross societies and philanthropic efforts on the part of the nation generally that the fear is that the authorities at the Cape will be embarrassed by the abundance of the supplies arriving for the sick and wounded and the difficulty of transporting and distributing them so as to be available when and where they are wanted.

A batch of invalids from the Cape has already arrived at the Herbert Hospital, Woolwich, and all arrangements have been made for the transport of other batches on arrival by special trains (fitted with every convenience) to Netley where ample provision has been made for their reception and accommodation. The sick and wounded men coming from the heat of a South African climate to England in mid-winter will require very ample and prompt supplies of warm clothing to guard them against the effects of cold, especially in the case of those suffering from dysentery. It is probable, indeed, that provision has been made on shipboard for the supply of warm underclothing to the men during the voyage home. It is possible, too, that it might be well to provide for the landing and hospital accommodation at some station *en route* of such patients as may be unfit to encounter the risk of this climate at this season.

Since this article was in type the serious news of Lord Methuen's abortive attack on the Boers' strongly entrenched position on the hills north of the Modder river has reached this country. Lord Methuen's force failed to dislodge the enemy and the attempt was attended with heavy British losses. The British repulse is to be much deplored not only on account of the casualties but because of the bad effect which it may have upon the Cape Dutch. Up to the moment of writing we have seen no list of the killed and wounded, but it is to be feared that the medical officers accompanying the column will be subjected to a severe strain. While everyone must deeply sympathise with the wounded and with all who have relatives and friends in the attacking force in their anxiety it has always been part of our national character to bear disappointment with fortitude until success has been won.

THE MEDICAL STAFF OF THE PORTLAND HOSPITAL (RED CROSS).

Senior Surgeon: Mr. Anthony Bowlby, of St. Bartholomew's Hospital. Surgeons: Mr. Cuthbert Wallace, of St. Thomas's Hospital; and Dr. Ernest Joseph Calverley. Physician: Dr. Howard Tooth, of St. Bartholomew's Hospital. Major C. R. Kilkelly, R.A.M.C., of the Grenadier Guards, has been appointed to the military command of the hospital and of the non-commissioned officers and men of the Royal Army Medical Corps. There are 28 men provided by the St. John Ambulance Association. Major-General the Hon. H. F. Eaton has been appointed to supervise and control the arrangements for the equipment and despatch of the Portland hospital on Dec. 13th by the troopship *Majestic*. The hospital will be fitted for the treatment of 104 patients. With the exception that the medical and surgical staff are civilians the hospital will be equipped in all respects as a military hospital and will be at the disposal of the commanding officer in South Africa to be used either as part of a "base hospital" of 500 beds or else as a separate "stationary hospital" on the line of communication. It will be provided with its own tents and ambulance waggons. The Portland Hospital is a complete military unit and will of course be under just the same military control as any other service hospital. The staff left London for Liverpool on the night of Dec. 12th. There was no demonstration, but Sir Thomas Smith and some other personal friends went to the station to bid the staff good-bye. In addition to the medical and bearer staff there are four nurses going out—namely Miss Cox Davies (in charge) and Miss Pretty of St. Bartholomew's Hospital, Miss Davies of King's College Hospital, and Miss Russell of St. Thomas's Hospital. The credit of initiating the idea is due to Mr. George Stoker.

A GENEROUS OFFER.

An offer has been made by Messrs. Maple and Co. to place at the disposal of the Government for the use of invalids returning from the war 30 beds in the firm's convalescent home at Harpenden for soldiers and 10 beds for sailors. The 40 beds are to be available for a period extending from the present time to the end of next year and the firm will pay all the expenses of feeding and otherwise providing for the invalids during their stay in the home.

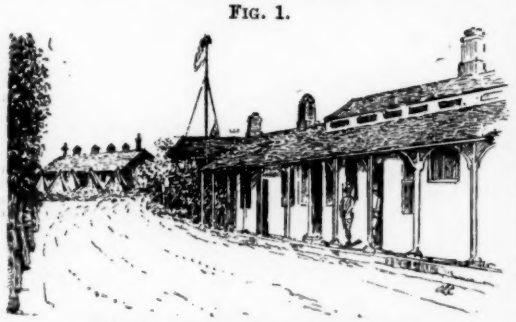
(FROM OUR WAR CORRESPONDENT.)

I landed on South African soil at 9.30 P.M. on Nov. 17th. Naturally I found things and places considerably changed from what I observed on a visit to the port some five-and-twenty years ago. There was then little bustle and less excitement in a sort of sleepy hollow, but to-day all this is changed. Stagnation has given place to a go-ahead activity in commercial as well as domestic affairs, and the inevitable result of importation of new blood is discernible on every hand. A glance at the water which surrounds Cape Town confirms this, for the usually placid sea in this lovely land-locked bay is dotted over its length and breadth with shipping of every imaginable description, from a majestic Ocean liner to the smallest wind jammer that ever floated, each and all discharging their animate and inanimate freights on to wharves and jetties of the metropolis of South Africa. The normal population of Cape Town should be about 85,000, but it is computed that within a few weeks the number of persons to be housed and fed has reached a total of 150,000, throwing no small strain on the resources of this colony. In spite of the magnitude of the requirements there is still enough and to spare. The hotels are all full and the boarding-houses crowded to their utmost capacity. Small wonder is it that locomotion is difficult in the over-filled streets of the city. Soldiers in khaki here, there, and everywhere, sailors, civilians, Cape boys, refugees (men, women, and children) all unite to form a conglomerate mass of humanity and fill in a picture as varied and uncommon as one could possibly imagine. Hence it was with no small difficulty that I could gain any information about the officials whom I desired to see, the proper *visé* of my military licence necessitating such a step. All my inquiries were usually met by the reply of "not at this department; but possibly somewhere else," and so nearly a whole day was wasted in looking up the official to put me on the right track. This delay was, however, necessary. Considering that the Boer spy system runs rampant through the city great caution has to be exercised, and for obvious and very proper reasons the reticence exercised by the military authorities in every department becomes an absolute and imperative necessity.

Once in the authorised official groove, however, it took little time to satisfy the first outpost, the press censor, and from his conning tower to the military medicals' citadel was a short step. I might reasonably have expected a check here in the running, but the expected in

this instance happily did not happen, for, instead of putting a curb on my doings and sayings, I was encouraged by the promise of "a fair field and no favour," and Surgeon-General Wilson remarked "that THE LANCET had sent out their man just in the very nick of time." Certain things had been done and expressions used in England lately disparaging to the military medical officers' capacity, the salt of life to these critics being to stir up strife, deprecating the noble and heroic behaviour of our service medical men. They endeavoured to act on ignorant and weak minds and to place them, the military professional men, at a disadvantage with their civil brother practitioners. "Come, see, and judge," said the principal medical officer, "for yourself. Everything under my charge is open for your inspection and comment. You will be offered the freest and fullest opportunity of knowing what has already been accomplished and what is purposed to be done in the near future for the comfort, attention, and care of all ranks that may fall on the field of battle and if you see anything not fully up to the mark say so; but do not hesitate to speak otherwise if you think our professional work is worthy of commendation." He further added: "I have just written this letter to all members of my medical staff; read it, and you will see that I have instructed them one and all to receive you and afford you every information that your editors may require, so that the truth may be known to every reader of your world-known journal. Further than this, I will be up in the hospital myself in an hour or so's time and personally show you every case in the wards worth commenting on." I enclose a sketch of the administrative offices at the Wynberg Military Medical Camp (Fig. 1)

FIG. 1.



Administrative offices at Wynberg Military Medical Camp.

and a plan of No. 1 General Hospital at Wynberg (Fig. 2). From noon till late in the afternoon the Surgeon-General was in all the various wards, medical (No. 18 on plan) and surgical (No. 19 on plan), showing me case after case, especially gunshot wounds, and conclusively proving beyond any dispute that the Mauser bullet goes clean through the soft tissues, leaving no jagged appearance of the flesh at its exit, but simply a small opening very little, if any, larger than that by which it entered.

It will naturally be of interest, not alone to the professional readers of THE LANCET, but to any persons having relatives or friends wounded and in the base hospital, to be assured that every case is doing well and proceeding fast to complete recovery, the majority of them possessing the outward appearance of robust health. These are facts beyond question of dispute and speak for themselves, as well as go far to contradict, once and for all, those disgraceful misrepresentations made by some persons quite unqualified to judge that our wounded were not receiving all the professional attention and care that they ought to have. After a very careful examination of the hospital—the equipment, fittings, food, drink, and, above all, the professional attention and care bestowed on all the wounded—I can well understand the principal medical officer's desire for criticism and why he said, "Come, see, and judge for yourself."

Wynberg Military Medical and Surgical Camp No. 1,
Tuesday, Nov. 22nd, 1899.

(FROM OUR SPECIAL CORRESPONDENT AT THE BASE.)

This week's letter will be a very short one as, owing to the lull in hostilities, we have had no sick or wounded from the front since I last wrote, with the exception of eight Boer prisoners who were too ill to be sent to the prison ship at Simons Bay. The cases of these men fully bear out what I stated as to the difference in the severity of the "Mauser" and "Lee-Metford" bullet wounds, all of them having been severely wounded by our troops at Elands Laagte.

Their wounds are briefly as follows:—

1. Wound of the knee-joint and transverse fracture of the patella; also three flesh bullet-wounds—two in the left and one in the right thigh.

2. Bullet-wound of the left arm, the aperture of entry being four inches above the olecranon on the posterior surface of the arm internal to the shaft of the humerus; exit two and a half inches long on the flexor surface of the forearm, commencing at the centre of the antecubital fossa; also wounds of the left index finger and of the left thigh.

3. Perforating bullet-wound of both orbits; entrance at the inner canthus of the right orbit, perforating the nasal bone, passing through the posterior part of the left orbit and emerging half an inch behind the external angular process of the left orbit; the sight of the right eye is considerably diminished; that of the left is destroyed. The nature of the absolute nerve injury has not yet been defined as the patient is too weak to be satisfactorily x-rayed.

4. Perforating wound of the head of the left tibia.

5. Bullet-wound in the right calf; the course is from the centre of the calf downwards, inwards, and forwards, terminating two inches above and behind the lip of the internal malleolus.

6. Bullet-wound of the right thigh, passing through the femur at the junction of the middle and lower third.

7. Lacerated and perforating shell wound of the left hand, a fragment passing between the second and third metacarpal bones from the dorsum to the palm.

8. Shell wound of the right thigh, from the apex of Scarpa's triangle outwards and backwards to three inches below and behind the great trochanter; no bones are injured. Wound of the right buttock and a transverse wound of the right tibia two and a half inches above the malleolus.

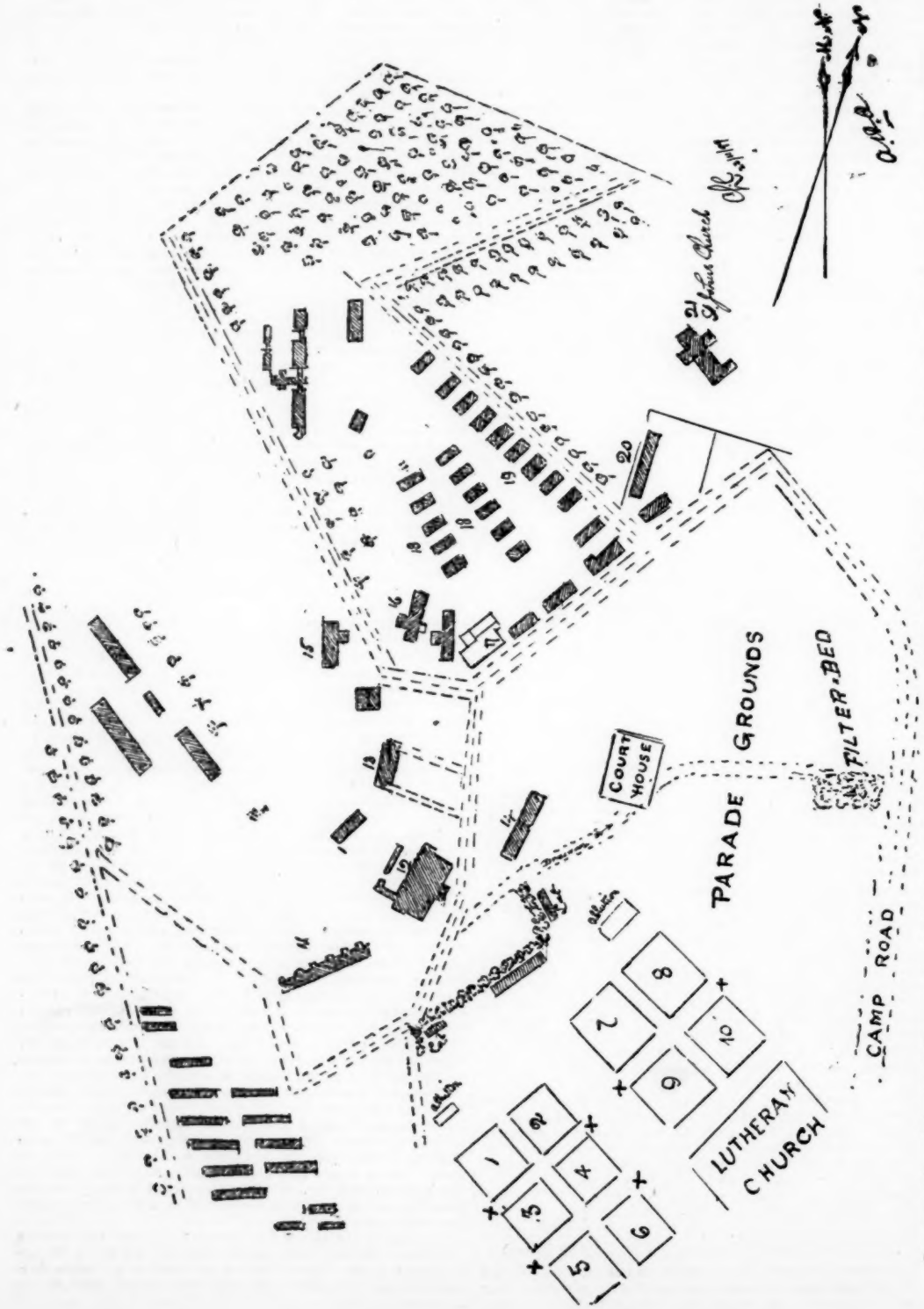
These wounds were all severe and the apertures of both entry and exit were much larger than those produced by the Mauser (in the case of rifle wounds). They are all progressing favourably and owe much to the careful treatment that they received on the field.

The majority of the British wounded are doing well—in fact, a great number of them are nearly fit to return to duty. A good case of wound of the upper brachial artery and consequent traumatic aneurysm was operated on and the artery tied; after turning out a great quantity of old clot the hæmorrhage was controlled by pressure on the subclavian; very little blood was lost. The patient is doing well.

I am sorry to say that the transports are dropping a lot of sick on arrival here, mostly reservists; and in some cases the results of specific disease acquired whilst in India or elsewhere when serving with the colours are very much *en évidence*. Of course, in a campaign like this, where it is necessary to call up reservists, it is brought very much to notice what terrible ravages are made amongst the men by this dreadful disease, and the trouble is greatly accentuated when it becomes absolutely necessary to admit them to hospital for treatment instead of getting them to the front as soon as possible. The Exeter Hall people have a lot to answer for in this particular instance, for I venture to say that if these men had been properly guarded by the Contagious Diseases Act in India or elsewhere we should not have had them on our hands in such quantities now. However, that is another story, but, all the same, it bears out the contention of most military medical officers who have served in India for any length of time. All the wounded officers are doing first rate and will in some instances soon be able to take the field again, though, of course, it has been necessary to send home a few who are not likely to be able to do much for some time.

The *personnel* for No. 2 General Hospital arrived a day or two ago, and they are busy getting their hospital into working order. When complete we shall be able to accommodate nearly 1200 patients between us. Sir William Mac Cormac and Mr. Makins arrived by the *Briton* on Monday, so we shall have the benefit of their advice on any cases that need it.

The Society for Aiding the Wounded by providing luxuries whilst in hospital is doing great things for us, and I venture to think that Mr. Thomas Atkins has never had a better time in hospital as far as comforts are concerned than he is getting at present. The weather now is everything that could be



Plan of No. 1 General Hospital at Wynberg. Nos. 1, 2, 3, 4, 5, 6, 8, 9, and 10 are blocks on which No. 2 Station Hospital is to be erected. No. 11, Nurses' quarters. No. 12, Officers' quarters. No. 13 and 15, Store-house. No. 14, School-room. No. 16, Linen store. No. 17, Administrative offices. Nos. 18 and 18, Medical wards. No. 19, Surgical wards. No. 20, Engineer quarters. No. 21, St. John's Church.

desired and helps the men along wonderfully, and now that things have settled down a bit everything is running as smoothly as could be wished; no expense has been spared and anything in moderation is provided, so that patients, be they officers or men, will be very hard to please if they are not satisfied. I might add that the x-ray room has been in full swing for the past week or two and Mr. Fox Symonds has been very successful in his efforts to make it as complete as possible in every detail.

Sir William Mac Cormac and Mr. Makins visited this hospital this morning, and as far as I can gather expressed their greatest satisfaction regarding the progress of all the cases and the admirable manner in which the patients' comforts and their welfare were being looked after.

No. 1 General Hospital, Wynberg, Nov. 22nd.

ASYLUM REPORTS.

London County Asylum, Claybury, Essex (Annual Report for 1898).—The average number of patients resident during the year was 2488, and they comprised 1038 males and 1450 females. During the year 554 patients were admitted—viz., 235 males and 319 females. Dr. Robert Jones, the medical superintendent, states in his report that about 18 per cent. of the patients admitted were over 60 years of age and were not hopeful cases. Regarding the ages at which insanity manifested itself it appears that "the age of greatest incidence in males was the decade 30 to 40, and in females 25 to 30." As to the civil state more single women and married men were admitted, and three times as many widows as widowers. Intemperance in drink accounted for 18 per cent of the causes of insanity among the persons admitted. Indeed, one feature of the admissions was the unusually large number of women suffering from multiple neuritis—a disease which betrayed its alcoholic origin. A predisposition given by previous attacks and a tainted heredity were able to account for 20 per cent. of the admissions. Less than the usual number of epileptics were admitted, and the establishment of a separate home for this class has already been sanctioned. 30 general paralytics (24 males and six females) were admitted, being 10 per cent. males, and 2 per cent. females. 200 patients (71 males and 129 females) were discharged recovered, being 8 per cent. of the average number resident. Of these discharged cases 7 per cent. relapsed during the year. Of the patients discharged on trial, 10 per cent. relapsed during the period of trial. A certain latitude is to be maintained in selecting patients for discharge, and even in the absence of complete recovery the desire of friends and the condition of the surroundings after discharge may justify the discharge of one patient and not of another. 267 patients (114 males and 153 females) died during the year—a total of 10·7 per cent. of the average number resident. Of the deaths one was due to suicide, 10 were due to epilepsy, 17 to gross organic cerebral disease (hæmorrhage, softening, &c.), 23 to cardiac disease, and 30 to pneumonia and bronchitis. Senile decay accounted for the large proportion of 25 deaths; 18 deaths were due to colitis, which occurred in an epidemic form and caused much anxiety. The highest mortality was, however, due to phthisis and tuberculosis, which caused 28 deaths, and general paralysis, which was responsible for the enormous number of 51 deaths. A patient who was pregnant upon admission was safely delivered of a male child. She has since been discharged recovered. Small outbreaks of scarlet fever and measles occurred, but they were satisfactorily isolated and treated.

London County Asylum, Colney Hatch (Annual Report for 1898).—The average number of patients resident during the year was 2554 and comprised 920 males and 1634 females. During the year 488 patients (177 males and 311 females) were admitted. Dr. W. J. Seward, the medical superintendent, points out in his report that as regards the more important predisposing and exciting causes, in 24 per cent. of the admissions hereditary influences were found to exist, 12 per cent. were due to alcoholic intemperance (the proportion in the case of the male admissions being 19 per cent.) and 25 per cent. were known to have had previous attacks. Among the admissions were 49 cases of epilepsy and 31 of general paralysis, 19 of the latter being males and 12 females. 31 patients were over 70 years of age, and Dr. Seward expresses the "hope that at some future time it may be possible to provide suitable infirmary accommodation for such cases in London." 15 boys were admitted during the year "but it is very desirable that more suitable provision should be made for them by the erection of a detached villa for which a convenient site might probably be found adjacent to the proposed epileptic colony at Horton. They would then be entirely separated from the adult patients and satisfactory arrangements could be made for their recreation, instruction, and employment." The admissions included 86 Jewish patients, the majority of whom were of foreign nationality. 194 patients were discharged as recovered during the year, or 7·5 per cent. of the average number resident. 115 patients were discharged unrecovered and of these 24 were removed to the Metropolitan District Asylums, 25 were discharged to the care of their friends, 65 were transferred to other asylums, and one male patient escaped and was not recaptured. The total number of deaths was 207 (88 males and 119 females), or 8·1 per cent. of the average number resident. The causes of death were as follows: general paralysis in 36 cases, epilepsy in 17, cardiac disease in 11, senile decay in 13, phthisis in 26, and general paralysis in 36 cases. 47 were attributed to chronic brain disease. At the commencement of the present year (1899) influenza made its appearance. A large number both of the staff and of the patients were attacked, but the disease was mild and there were few complications. Much attention has been given to sanitary matters and a work of considerable importance has been approaching completion. "The sewage of the asylum has hitherto been applied to the land, but it will in future be carried to the sewage works of the district council and the necessary connexion is now being made. ..... Accommodation has been provided near both of the entrance gates for the convenience of visitors to the patients. ..... Several of the summer-houses in the airing courts have been rebuilt. A large class of students from the London School of Medicine for Women received clinical instruction in the asylum last summer from their lecturer, Dr. Mercier."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Leeds Urban District.—The unhealthy areas of Leeds are receiving much attention at the hands of the Town Council, and Dr. Spottiswoode Cameron reports that considerable progress in this direction, as also in that of the removal of obstructive buildings, was made during 1898. The year was also notable for the erection of a new sanitary depôt with stabling for some 169 horses and accommodation for ambulances and disinfecting vans. New scarlet fever pavilions, forming part of the permanent fever hospital on the admirable site at Manston Hall, were also erected. It will, however, be some time before the population of Leeds, estimated to the middle of 1898 at 416,618, will be adequately provided with permanent isolation accommodation. It may be observed in this connexion that during 1898 scarlet fever was more prevalent than in any year since compulsory notification came into force. In regretting this fact Dr. Cameron points out that during the last four years they have been unable to isolate in hospital anything approaching the 80 or 90 per cent. of notified cases which he thinks in Leeds require to be isolated; indeed, in 1898 only 532 patients out of the 2002 notified cases could be accommodated in hospital, and of the 532 so isolated only 413 were removed during the week in which their existence was brought to the notice of the sanitary authority. It is clear, therefore, that a large number of the cases eventually isolated had ample opportunity of being centres of infection before they were removed. Diphtheria was, too, very prevalent in Leeds during 1898 and comparatively new houses were in certain parts largely invaded by this disease. Dr. Cameron thinks that an explanation for this may possibly be found in the fact that new houses are often occupied by persons with young and growing families. Enteric fever also showed a predilection for new property during 1898. The figures relative to deaths from tuberculosis in Leeds for the nine years 1890-98 are

encouraging. In the first three years of this period the death-rate was 2·43, in the second 2·33, and in the third 2·19 per 1000, the diminution being greater at age-periods above five years than at ages below five years. Dr. Cameron expects that the good work which is now being done in the removal of slums will have the effect of further reducing the phthisis rate. He proposes that the disinfection of houses in which deaths from pulmonary tuberculosis have occurred should be rigorously carried out.

Northamptonshire County District.—Mr. C. E. Paget, in presenting his second annual report, expresses his satisfaction at the fact that there is already a growing disposition on the part of the district councils to have the reports of their medical officers of health printed and we are glad, too, to note that the annual reports were all received by the county medical officer of health at an early date. The total population of the county was estimated at the middle of 1898 at 234,902. The birth-rate for the county was 28·29 and the death-rate was 14·3 per 1000, as compared with a death-rate for the whole of England of 17·5 and of the large towns of 19 per 1000. The infantile mortality was 133·59 per 1000 births. As regards isolation accommodation in the county Mr. Paget reports that there is provision of a sort in or for seven of the 14 urban districts, and for six out of 16 of the rural districts. He is, however, undecided at present as to whether it will be desirable to bring the Isolation Hospitals Act into operation or to endeavour to bring about hospital provision under the powers of the Public Health Act, 1875. There has been marked activity in many parts of the county in the direction of water-supply and it is clear that the circular which was issued last year by the Local Government Board advising that surveys of gathering grounds, &c., should be made has in many instances been fraught with good results, even if only in the direction of bringing to light the dangers which exist. Mr. Paget urges upon the local authorities the importance from the point of view of the prevention of bovine tuberculosis of drawing up regulations under the Dairies, Cowsheds, and Milkshops Order. It is certainly to be regretted that district councils throughout the country pay such scant attention to this matter. In addition to his annual report Mr. Paget has issued for the guidance of local authorities in the county a special report on the measures which should be taken to prevent the spread of infectious diseases, and this pamphlet should serve a useful purpose in educating the public and in reminding the district councils of their responsibilities.

Essex County District.—The population of this important county increases with great rapidity, and during 1898 some 42,420 persons were added to it. Dr. Thresh estimates that in another five years the total population will reach to at least 1,000,000. The birth-rate for 1898 was 27, and the general death-rate 14, per 1000 in each case, the death-rate for the rural districts being slightly in excess of that for the urban. Dr. Thresh devotes some space in his report to a consideration of phthisis, the death-rate from which in Essex appears, he states, to be diminishing. As regards the connexion between shellfish and enteric fever, of which Essex has already afforded some examples, the report before us states that in 12 of the cases which occurred at Southend the patients had eaten shellfish of one or another sort within a month of the date of notification, but, as Dr. Thresh observes, it by no means follows that shellfish caused the disease. Isolation accommodation varies much in different parts of Essex and the county medical officer of health has grouped together the districts in order of merit in this respect; nine districts, we regret to see, have no such provision whatever. The Housing of the Working Classes Acts do not receive much attention in Essex and Dr. Thresh thinks that the county council might in certain districts exercise their powers in this direction with considerable effect. The future water-supply of Essex is a problem which is beginning to excite some anxiety and the county medical officer has done well to bring the matter prominently to notice in his current report. He points out that the population is increasing but that the available water-supply is limited. At the present time some 5,000,000 gallons of water are required daily, allowing 30 gallons per head of the population. It is estimated, however, that in 1930 some 20,000,000 gallons will be daily required, and as considerable difficulty has already been experienced in obtaining the amount now needed no little anxiety is felt as to the future. The two main sources of supply are the watershed of the Roding and the deep wells in chalk or the overly ingsands. With respect to the Roding Dr. Thresh thinks that its waters should only be used as a last resource and then only after most rigorous treatment. The possibility, however, that in the future this water may have to be used shows the necessity for removing as far as possible the several sources of pollution to which it is at present liable. As regards the chalk water Dr. Thresh reproduces in his reports the very interesting paper which he contributed to the British Association of Waterworks Engineers, in which he points out by the aid of many analyses the fact that the chalk water under the whole of Essex, save near the outcrop, is rich in carbonate, sulphate, and chloride of sodium, but contains no lime or magnesium salts except carbonates. All these waters contain much less calcium carbonate than chalk waters from other localities. The water level in the deep wells is, we are told, easily reduced and only recovered after a long interval—facts which point to the great compactness of the chalk. In discussing this reduction of the calcium and magnesium salts and the presence of the sodium salts Dr. Thresh expresses the view that under certain portions of Essex the water is practically stagnant and that the salts referred to have resulted from the action between the water entering from the chalk outcrop on the west and the sea-water entering on the east from the outcrop under the ocean. He thinks that very little water now enters the chalk from the western outcrop and that hence the multiplication of deep wells will bring about a further reduction of this water-level and an influx of sea-water at a greater rate "than the reactions which have produced the saline constituents of the water now in the chalk can keep pace with and the supply will gradually become brackish." Were it not for these prophecies we should be inclined to congratulate Dr. Thresh upon the several deep wells in contemplation throughout the county.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6085 births and 4552 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had been 19·3 and 18·9 per 1000 in the two preceding weeks, rose again last week to 20·8. In London the rate was 22·4 per 1000, while it averaged 19·7 in the 32 provincial towns. The lowest death-rates in these towns were 13·1 in Croydon, 13·4 in Norwich, 13·5 in Oldham, and 14·3 in Cardiff; the highest rates were 23·4 in Hull, 25·3 in Preston, 25·9 in Liverpool, and 26·4 in Plymouth. The 4551 deaths in these towns included 480 which were referred to the principal zymotic diseases, against 422, 434, and 450 in the two preceding weeks; of these 135 resulted from measles, 113 from diphtheria, 75 from "fever" (principally enteric), 70 from whooping-cough, 38 from scarlet fever, 38 from diarrhœa, and 11 from small-pox. No fatal case of any of these diseases occurred last week in Gateshead; in the other towns they caused the lowest death-rates in Croydon, Plymouth, Bristol, and Huddersfield; and the highest rates in Salford, Blackburn, Sheffield, and Hull. The greatest mortality from measles occurred in Birkenhead, Salford, Preston, Sheffield, and Hull; from whooping-cough in Leicester, Liverpool, Salford, and Blackburn; and from "fever" in Wolverhampton, Nottingham, Derby, and Bolton. The mortality from scarlet fever and from diarrhœa showed no marked excess in any of the large towns. The 113 deaths from diphtheria included 43 in London, 16 in Sheffield, 11 in Leeds, six in Liverpool, and four in Norwich, in Manchester, in Blackburn, and in Preston. 11 fatal cases of small-pox were registered in Hull last week, but not one in any other of the 33 large towns, and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Dec. 9th, was 3290, against 3578, 3503, and 3445 at the end of the three preceding weeks; 278 new cases were admitted during the week, against 334, 293, and 294, in the three preceding weeks. Influenza was certified as the primary cause of 42 deaths in London. The deaths referred to diseases of the respiratory organs in London, which had increased from 324 to 430 in the four preceding weeks, further rose to 548 last week, and were 112 above the corrected average. The

causes of 49, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Salford, Bradford, Leeds, and in 12 other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Sheffield, and Hull

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 17·0 to 20·5 per 1000 in the four preceding weeks, declined again to 20·0 during the week ending Dec. 9th, and was 0·8 per 1000 below the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 14·1 in Leith, and 17·6 in Edinburgh to 21·9 in Dundee and 37·6 in Greenock. The 611 deaths in these towns included 28 which were referred to measles, 20 to diarrhœa, eight to whooping-cough, eight to "fever," five to diphtheria, and not one either to small-pox or to scarlet fever. In all 69 deaths resulted from these principal zymotic diseases, against 98 and 74 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·3 per 1000, which was 0·1 in excess of the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 43 and 34 in the two preceding weeks, further declined to 28 last week, and included 13 in Greenock, seven in Dundee, and six in Glasgow. The deaths from diarrhœa, which had been 15 and 18 in the two preceding weeks, further rose last week to 20, of which eight occurred in Glasgow, seven in Dundee, and three in Aberdeen. The fatal cases of whooping-cough, which had been 14 and six in the two preceding weeks, rose again to eight last week, and included three in Glasgow, two in Aberdeen, and two in Perth. The deaths referred to different forms of "fever," which had been five and seven in the two preceding weeks, further rose last week to eight, of which four were registered in Glasgow and three in Paisley. The fatal cases of diphtheria, which had been 13 and three in the two preceding weeks, rose again to five last week, and included three in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 128 and 131 in the two preceding weeks, further rose to 159 last week, but were slightly below the number in the corresponding period of last year. The causes of 25, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 32·8 and 38·6 per 1000 in the two preceding weeks, declined again to 38·5 during the week ending Dec. 9th. During the past four weeks the death-rate in the city has averaged 36·7 per 1000, the rate during the same period being 19·2 in London and 17·5 in Edinburgh. The 258 deaths registered in Dublin during the week under notice were within one of the number in the preceding week, and included 41 which were referred to the principal zymotic diseases, against numbers declining from 72 to 44 in the three preceding weeks; of these, 30 resulted from measles, four from diarrhœa, three from diphtheria, two from "fever," one from scarlet fever, and one from whooping-cough. These 41 deaths were equal to an annual rate of 6·1 per 1000, the zymotic death-rate during the same period being 2·1 in London, while no death from any of the principal zymotic diseases was registered in Edinburgh. The deaths referred to measles, which had been 51, 38, and 29 in the three preceding weeks, rose again last week to 30. The four fatal cases of diarrhœa corresponded with the number in the preceding week. The deaths resulting from diphtheria, which had been two in each of the two preceding weeks, increased to three last week. The fatal cases of "fever," which had been four and six in the two preceding weeks, declined again to two last week. The 258 deaths in Dublin last week included 43 of infants under one year of age and 52 of persons aged upwards of 60 years; the deaths of infants considerably exceeded the number in the preceding week, while those of elderly persons showed a marked decline. Six inquest cases and six deaths from violence were registered, and 102, or nearly two-fifths, of the deaths occurred in public institutions. The causes of seven, or nearly 3 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Staff Surgeon William George Jack to be Fleet Surgeon in Her Majesty's Fleet.

The following appointments are notified:—Staff Surgeon A. S. Nance to the *Black Prince*. Surgeons: G. R. MacMahon to the *Galatea*; Benjamin G. Heather to the Plymouth Division, Royal Marines; and Harold J. Chater to the *Magnificent*.

ROYAL ARMY MEDICAL CORPS.

Surgeon-Lieutenant Frederic Harvey, who was appointed on Nov. 17th, 1899, should have been described as from the Volunteer Medical Staff Corps.—*London Gazette*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain John Wilson Moir, 1st Fifeshire Volunteer Artillery, to be Surgeon-Major; Surgeon-Captain James Drummond to be Surgeon-Major; and Surgeon-Lieutenant Bonner Harris Mumby, 3rd Volunteer Battalion the Hampshire Regiment, to be Surgeon-Captain.

MILITIA MEDICAL STAFF CORPS.

The undermentioned Surgeon-Lieutenants to be Surgeon-Captains: W. K. Steele and L. W. A. Keiffenheim-Trubridge.

VOLUNTEER CORPS.

Royal Engineers: 1st Aberdeenshire: Surgeon-Lieutenant A. Henderson to be Surgeon-Captain. *Rifle:* 2nd Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon-Major E. D. Berton resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on his retirement. 4th Volunteer Battalion the South Wales Borderers: Surgeon-Captain T. E. Lloyd resigns his commission. 1st Dumbartonshire: Surgeon-Lieutenant J. A. Boyd to be Surgeon-Captain.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The annual entertainment and presentation of prizes in connexion with the school took place at St. Martin's Town Hall on Dec. 7th. The proceeds are to be given to the Red Cross Society for aid to the sick and wounded in war. Thanks to the energy of Surgeon-Captain R. R. Sleman an excellent programme was given to a crowded and enthusiastic audience. Surgeon-General J. B. Hamilton, late Principal Medical Officer, Cape Colony, distributed the prizes. After the distribution he gave an interesting outline of the work now being done by the medical staff in South Africa. He mentioned how after the battle of Elands Laagte the medical staff, having already been hard at work during the engagement, had to work all night on the hillside in "torrents of rain and seas of mud" attending to the wounded, and then had to accompany them in an ambulance train to Ladysmith. He also pointed out that the medical staff of our army is in a very unsatisfactory condition numerically. Forty years ago the total strength of medical officers was over 1100; to-day the executive ranks barely number 800. Of these, 408 are on ordinary foreign service, 240 in South Africa, and about 100 effective officers in the United Kingdom. When the two further divisions now being mobilised were provided for the Royal Army Medical Corps would have closely approached the vanishing point in the United Kingdom. It was apparent that although there was no lack of military ardour in the profession the Royal Army Medical Corps was not as popular with the medical schools as it should be. It was therefore clearly the duty of the authorities to try to discover the causes of this unpopularity and to remedy them as speedily as possible. Major Andrew Maclure, V.D. (who was in the chair), in his report stated that 400 medical officers and 3000 non-commissioned officers and men had passed through a course of instruction at the school qualifying them for the War Office proficiency certificate and that the Ambulance Challenge Shield open to all members of the Yeomanry and Volunteer forces of Great Britain had been again won by members of the school.

Great activity prevails at Netley Hospital, where preparations are being made to receive the wounded from the seat of war. Orders are still being received at this hospital for the despatch of detachments of the Royal Army Medical Corps to the front.

TRANSVAAL WAR NOTES.

The governors of Princess Christian's Cottage Homes of Rest for Disabled Soldiers and Sailors at Bisley have received as the result of a special appeal the sum of £730.

Surgeon Charles C. Macmillan of the *Terrible* has been landed in Natal for service on shore.

The suggestion that retired officers who are able to do so should provide accommodation for invalided soldiers of their old regiments has, we understand, received the approval of the Commander-in-Chief.

The Portland Field Hospital, which has been fitted out by private enterprise for service in the field, consists of a complete hospital unit. The staff includes one military and four civilian medical officers. Mr. Anthony Bowlby, F.R.C.S. Eng., is the senior surgeon, and he will be assisted by Dr. Howard H. Tooth, F.R.C.P. Lond., as physician, Mr. Cuthbert S. Wallace, F.R.C.S Eng., and Dr. J. E. G. Calverley. The commanding officer is Major Charles R. Kilkelly, R.A.M.C.

In THE LANCET of Nov. 25th, at page 1467, will be found a letter from Dr. P. M. Braidwood, calling attention to the necessity for a specially organised and instructed Naval Ambulance Association analogous to the St. John Ambulance Association, and in the *Times* of Dec. 12th there is a letter from Mr. S. Osborn, F.R.C.S. Eng., asking whether one or more hospital ships should not be kept permanently in commission. The idea is one which should receive earnest attention, and the delay which has occurred and is occurring in the dispatch of private hospital ships emphasises the urgent need of the provision for which Dr. Braidwood and Mr. Osborn plead.

THE ROYAL NAVY LIST DIARY AND NAVAL HANDBOOK.

The third year's issue of the Royal Navy List Diary and Naval Handbook just issued is a useful and almost indispensable adjunct to users of Lean's Royal Navy List. The diary portion is arranged to give a whole page to a day and is furnished with a separate index, monthly cash account, space for memoranda, letter register, schedule for recording all ports visited, and complete schedules for the recording of all drills and operations when in commission, and the making up of all the necessary returns for the Admiralty. In the letterpress accompanying the diary will be found a calendar of notable naval events (it is gratifying to notice that one of the notable events for Sept. 6th is the gallantry of Surgeon Maillard, V.C., in Crete, 1898), an obituary for the year, with a full record of the war and meritorious services of deceased officers, and a detailed list of the benevolent funds and institutions in connexion with the Royal Navy. Another new feature in the 1900 edition is an interesting table giving the colours of the medal ribbons of the various British war medals, orders, and decorations granted to the Royal Navy during the nineteenth century. Among the original articles is one on the Naval Progress of the Year by Mr. L. Carr Laughton, one of the editors of the "History of the Royal Navy." There are also original descriptive articles on the Tides and on Terrestrial Magnetism, with tables of the secular, yearly, and diurnal variations and the magnetic elements, &c.

MEDICAL STAFF FOR SOUTH AFRICA.

The following officers of the Army Medical Corps accompany the New South Wales contingent for service in the South African War: Colonel Williams, P.M.O., in command; Captain R. E. Roth, Half-Bearer Company; Captain A. E. Perkins, Half-Bearer Company; Lieutenant T. M. Martin, Half-Bearer Company; Captain T. H. Fiaschi, Field Hospital; Captain T. A. Green, Field Hospital; and Lieutenant C. A. Edwards, Field Hospital. Dr. F. H. Quaife has presented the corps with a complete Roentgen ray apparatus for field practice.

The committee of the Leicestershire Convalescent Home, which is situated in the Charnwood Forest district near Loughborough, has placed the Home at the disposal of the War Office for four months for wounded soldiers returning from the war in South Africa and has offered to discharge the cost of their maintenance. 30 patients can be accommodated.

The *Times* announces that the Secretary of State for War has approved of the period of leave out of India granted to executive officers of the Royal Army Medical Corps on medical certificate during a tour of service being allowed to count towards the completion of such tour up to a maximum of 12 months.

A *Times* telegram announces the arrival of Sir W. MacCormac, K.C.V.O., and Mr. Treves and a large ambulance staff at Frere camp.

Surgeon-Lieutenant-Colonel H. R. Myers, V.D., 19th Middlesex Rifle Volunteers, has just retired on age limit.

Correspondence.

"Audi alteram partem."

VACCINATION CONTROVERSIES.

To the Editors of THE LANCET.

SIRS,—I observe that public debates on the vaccination question, in which members of the medical profession are taking part, are again becoming common as the winter season advances. May I again ask the favour of being allowed to remind any persons who propose to take a part in this important educational work that the Jenner Society can give useful assistance in it and that it will be glad to do so if applied to?

I am, Sirs, yours faithfully,

FRANCIS T. BOND, M.D. Lond.,
Honorary Secretary, Jenner Society.

Gloucester, Dec. 12th, 1899.

*** We believe that the cause of medicine will be well served if medical men will meet certain anti-vaccinationists on the open platform. We have published in THE LANCET of Oct. 21st, 1899, p. 1141, a list of the works which give in a handy shape the information which the public ought to know, and, as will be seen, a majority of the works can be obtained from the Jenner Society.—ED. L.

SOME POINTS IN LIFE ASSURANCE EXAMINATIONS.

To the Editors of THE LANCET.

SIRS,—For some years it has been my lot to examine many candidates for life assurance offices. The forms from the different companies of detailed queries which the physician has to answer vary but little. It is possible that even these queries with careful examiners are not strictly necessary, but if they be then I beg to submit two questions which should be added to the list: 1. What is the temperature of the candidate? 2. Has the candidate suffered from ear discharge and, if so, has the trouble completely cleared up?

The following cases which have lately occurred in my practice will illustrate:—A, aged 21 years, was submitted to examination. Every detailed question I could answer satisfactorily. The pulse was 84, nothing unusual in a candidate undergoing examination. I took the temperature, as I make it a rule to do so. It was 99·4° F. I postponed the case for a week, when in the right supra-scapular region I heard a single soft crepitation in the middle of forced inspiration. The case turned out to be one of incipient phthisis, which I must have passed over but for the use of the thermometer. I am certain the crepitation was not to be heard at the first interview. B, aged 29 years, came for examination. Here also all the printed questions could be satisfactorily answered. The pulse was 92 and the temperature was 99·6°. The candidate said he felt perfectly well. I asked him to call the next day, when the temperature was 102°. I examined him carefully and found perforation of the right tympanic membrane with purulent discharge. I heard from his medical man that he died 10 days after from cerebral abscess. C, aged 28 years, consulted me for ear trouble. He had perforation with purulent discharge. The temperature was 99·2°. By chance he was sent to me a few days later by a life insurance office for examination. I said, "Of course, I shall be unable to make a satisfactory report with your ear trouble not cured." He replied that he would not be examined until the discharge had stopped. I never saw him again, but I happened to hear later that he passed a life insurance examination the next morning. Whether this was the case or not was no concern of mine.

I could quote other cases, but I think these are sufficient to show that if the pulse-rate, which varies so much in health, has to be recorded so exactly, then certainly the temperature, which varies so little in health, should never be omitted in any examination for life insurance. It has been truly said that a man with perforated tympanic membrane is always in danger, and I think many will allow that a question regarding this would also not be superfluous.

I am, Sirs, yours faithfully,

FRANCIS TAYLOR SIMSON.

Craven House, Northumberland-avenue, W.C., Dec. 1st, 1899.

THE VITAL STATISTICS OF NEW ZEALAND.

To the Editors of THE LANCET.

SIRS,—Perhaps you will kindly allow me to call attention to the very remarkable statistics of New Zealand, as they seem to me to be well worthy the notice of all students of hygiene. The death-rates in the whole colony were in 1895 9·91 and in 1896 9·10 per 1000 inhabitants, as compared with 18·7 in England and Wales in 1895, with France 22·3, and with the German Empire 22·2. The town mortality in New Zealand in 1896 was from 14·42 in Auckland to 9·60 per 1000 in Dunedin. Phthisis caused 523 deaths in 1896, or at the rate of 7·40 per 10,000 inhabitants, against 13·85 per 10,000 in England and Wales in 1894. Zymotic diseases in 1896 caused a death-rate of 1·024 per 1000. Other tuberculous diseases in 1896 caused a death-rate of 2·22 per 10,000 inhabitants. If these figures are correct it seems probable that New Zealand people are the healthiest in the world. I take the figures from the New Zealand Year Book of 1897.

Perhaps the most remarkable feature in the vital statistics of New Zealand is the rapid fall in the birth-rate of the colony. In 1881 the birth-rate was 37·95 per 1000 inhabitants; in 1891 it was 29·01; and in 1896 it was only 26·33 per 1000. In England and Wales in 1895 the birth-rate was 30·4 and in the German Empire 36·1 per 1000, whilst France alone with 21·9 births per 1000 inhabitants in 1895 was somewhat as low in its birth-rate as our flourishing colony of New Zealand. Strange to say, the marriage-rate has increased in the colony since 1881, when 3277 marriages occurred in 493,000 inhabitants, for in 1896 there were 4843 marriages to 707,000 inhabitants. In 1886 the marriage-rate was 5·99 per 1000, and in 1896 it was 6·85 per 1000. The birth-rate out of wedlock was 44 per 1000 births, as compared with Scotland (76 per 1000 in 1890). In consequence of the small number of births in New Zealand at present the average number of births to a marriage in 1891 was 4·32, as compared with 4·16 in England and Wales and 2·98 in France. The newspapers of New Zealand have recently been discussing the causes of this low birth-rate, as it has had as a consequence the dismissal of a certain number of school teachers on account of the paucity of scholars to be taught.

It seems to me probable that the very low death-rate of 9·10 per 1000 inhabitants in the colony can only be accounted for by the very low birth-rate of 26·33 per 1000, which has lessened the struggle for food supplies with which Europeans are so familiar at all times. Meat and other foods are extremely cheap in New Zealand and it seems clear that when food is very easily obtainable by the working-classes, as it is there at present, the death-rate tends towards a minimum. If our home birth-rate was as low as 26 per 1000 we should doubtless have a lower death-rate than 18 per 1000, although our death-rate is much lower than that of most other European States. Yet the numbers in New Zealand increase rapidly, since the excess of births over deaths (26·33, less 9·10) gives the very high figure of 17·23 per 1000, against 11·7, which was the excess of births over deaths in England and Wales in 1895. The statistics of New Zealand remind me of the low birth- and death-rates of a comfortable suburb of London, Hampstead, with 18 per 1000 birth- and 12 per 1000 death-rates.

I am, Sirs, yours faithfully,

CHARLES R. DRYSDALE, M.D. St. And.,
Consulting Physician to the Metropolitan Hospital.

London, Nov. 22nd, 1899.

"THE PLAGUE IN RUSSIA."

To the Editors of THE LANCET.

SIRS,—Some weeks ago you were good enough to insert a letter from me on the subject of the outbreak of epidemic disease at Kolobovka at the mouth of the Volga.[1] It will be recalled that there was a marked difference of opinion among the leading members of the profession in St. Petersburg as to the true character of that epidemic, a minority regarding it as an outbreak of the pneumonic variety of plague, while a majority suspended their judgment until further information could be obtained. The task of collecting that information was entrusted to Professor Vinogradof and Dr. Raptchevski, who visited Kolobovka with that object. These gentlemen recently returned and on Nov. 2nd (14th) a second general meeting of the heads of the profession in St. Petersburg was held at which the further information they had obtained was discussed. In the end a minority of six expressed their opinion that the disease was "of a character closely resembling plague in its pneumonic form." The majority, on the other hand, 17 in number, were of opinion that the disease was "undoubtedly plague." In view of this result there can no longer be any hesitation in placing the outbreak in Southern Russia among the numerous other foci in the western extension of plague which has characterised the present year.

I am, Sirs, yours faithfully,

London, Dec. 1st, 1899. FRANK G. CLEMOW.

[1] THE LANCET, Oct. 7th, 1899.

"THE WORKING OF THE NEW VACCINATION ACT."

To the Editors of THE LANCET.

SIRS,—It seems to me (a public vaccinator) that Mr. G. J. B. Stevens in THE LANCET of Dec. 2nd has been somewhat hard both on the New Act and upon public vaccinators in general. Surely his complaints are somewhat exaggerated, or is it that, as you suggested, "he is smarting under some personal wrong?" But as a public vaccinator I should like to protest against his wholesale condemnation both of the New Act and of the public vaccinator in general. Now it seems to me that the wisest alteration in the Vaccination Act is that which removes the operation from the public station to the home of the child; and I am certain that this alteration has to a very great extent minimised the unpopularity of vaccination. But in performing vaccination at the home of the child I cannot see at present a better way out of the difficulty than the routine now in vogue. This I grant is inconvenient, but to no one is it more inconvenient than to the public vaccinator himself. The latter must occasionally in ignorance vaccinate in a case where the services of the family medical attendant could perhaps be afforded, but, on the other hand, the balance will certainly be on the side of fruitless journeys and time thrown away. But surely the New Act never intended that in carrying out the same one professional man should prey upon the patients of another? It is as absurd to suppose this as to doubt that with a strict adherence to medical etiquette courteous relationships may exist between the public vaccinator and his professional neighbours.

I myself have adopted a simple plan which saves me not only many a long and fruitless journey, but also, what is more important, lessens the chances of professional misunderstandings. This plan consists in giving at least three days' notice in those cases which I do not know to be my own and which I consider are likely to be able to afford the services of their own medical attendant. This gives them time to communicate back with me and saves many an unnecessary visit. Of course, if there is no reply to the notice one is bound to make the visit and then with a little tact it is very easy to ascertain whether the case is one for the public vaccinator or not. In the latter case anyone who has the least idea of medical etiquette will at once leave the house, but in poorer cases where the public vaccinator has a just footing he not only has a right, but it is also his duty, both to impress the importance of vaccination and combat objections to its performance.

I am, Sirs, yours faithfully,

G. L. THORNTON,
Public Vaccinator.

Ilfracombe, Dec. 4th, 1899.

To the Editors of THE LANCET.

SIRS,—In further answer to Mr. George J. B. Stevens's letter in THE LANCET of Dec. 2nd under the above heading it may be as well to point out that the name and address of no child is put on the public vaccinator's list till the age of four calendar months and seven days is attained and not even then until after personal inquiries have been made by the vaccination officer. (See Local Government Board instructions, p. 21, paragraph 6, subdivision *a*). "Ordinary general practitioners" who have not the misfortune of being also public vaccinators can by a timely attention to a serious need of their patients save themselves "daily robberies committed by Act of Parliament" and "depredations" on the part of the public vaccinator. Surely four and a half months is long enough to leave a healthy infant unvaccinated or otherwise unaccounted for to the vaccination officer.

Mr. Stevens must know by this time that the public

vaccinator has to give 24 hours' notice of his intention to "creep into their houses" to offer to vaccinate—rather a slow "creep." Does Mr. Stevens know that public vaccinators sometimes have patients who go to them for everything except vaccination because they dread the "four places" all conscientious men make? So far no public vaccinator has raised the shriek of "behind the backs of their usual medical attendants," "unfair and unprofessional," and "unfraternal business." This has been left to one who, I suppose, is an "ordinary general practitioner."

I am, Sirs, yours faithfully,

Dec. 4th, 1899. P. V.

"A SYMMETRICAL PALMAR ERYTHEMA."

To the Editors of THE LANCET.

SIRS,—Referring to the note on Symmetrical Palmar Erythema in THE LANCET of Dec. 2nd I may say that I have seen a similar condition in a lady impregnated with malaria from residence in India. She had also the triangular saffron patch on each temple. I understood from her that it was common in those who had suffered much from malaria. Dr. Chalmers does not mention this, but he might verify the point. I am, Sirs, yours faithfully,

Manchester, Dec. 3rd, 1899. J. W. STENHOUSE.

THE LATE DR. W. I. WHEELER: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Regarding the action of Dr. Wheeler against the Government for visiting Mayo, alluded to by your Dublin correspondent in THE LANCET of Dec. 9th, I would point out that unless my memory be very much at fault he ought to have put the figures at 1100 guineas and not 11 guineas. Having known Dr. Wheeler well I was interested and so read the reports of his action carefully. I recollect he brought forward some eminent Dublin surgeons to show that the charge was not excessive. Why such a fuss about a guinea a visit? Again, in the same report your correspondent mentions two guineas as being charged to visit North Dublin in consultation. Why visit West of Ireland for one?

I am, Sirs, yours faithfully,

Ilford, Dec. 11th, 1899. C. B. TOWNSHEND.

*** By a printer's error, which spoilt the whole story we must admit, the amount was given as 11 guineas instead of 1100 guineas. Our Dublin correspondent related the episode correctly.—ED. L.

"HORSE AMBULANCES AT LONDON HOSPITALS."

To the Editors of THE LANCET.

SIRS,—I have read with great interest your leading article on this subject in THE LANCET of Dec. 9th (p. 1599), the more so as for some years past I have advocated the establishment of an ambulance service capable of dealing with the accidents that occur in the streets and manufactories of London. It is a matter that is so evident and the need for such a service is so apparent that the only surprise is that it has not been set going long since. I quite agree with you that the police have too many duties to perform to add to them that of rendering first aid to our street accidents. The subject has cropped up on and off for years past, and many plans have been put forward, but so far nothing of any consequence has been effected. I suppose the reason is that of the want of money, for a system of any kind whatever must cost something, and even the limited plan you put forward will require an outlay for the purchase of ambulance carriages and for the laying down of the telephone calls. It is only a matter of detail, but you do not say who is supposed to go out with the ambulances, whether the first-aiders will be hospital students or paid assistants. Another point strikes me—viz., the distance of some of our populous suburbs from a hospital, in some cases three or four miles. However, these are only minor matters—the main point is to establish something to remove this blot from our city. Consideration for your space deters me from saying more, but I sincerely trust that now you have taken up the matter you will bring it to the notice of the Government or the London County Council.

I am, Sirs, yours faithfully,

Dec. 12th, 1899. THE EDITOR OF "FIRST AID."

THE LONDON SCHOOL BOARD AND UNDERFED CHILDREN.

To the Editors of THE LANCET.

SIRS,—Will you allow me to appeal in your columns on behalf of the funds of the London Schools Dinner Association? The association was formed in 1889 to provide cheap or free meals for underfed children attending the Board and voluntary schools of London. The association has repeatedly communicated with every public elementary school in London and it is prepared to make grants for any school on the application of a local committee, one member of which should be a teacher and another a manager of the school, who will undertake to administer with care and discrimination the grant which is made to them in alleviating the wants of the necessitous children. Last winter there were 59 such local committees dealing with the needs of 129 schools.

I am aware of the urgent claims at present pressing for national aid, but this object will, I trust, meet with the same generous support which the public has given it in former years. Donations will be gratefully acknowledged by the honorary treasurer, Lord Kinnaird, or by the secretary, London Schools Dinner Association, 37, Norfolk-street, Strand.

I have the honour to remain your obedient servant,

6, Great Stanhope street, Mayfair, Dec. 12th, 1899. REAY.

THE CONFERENCE AT NEWCASTLE AND THE MIDWIFERY QUESTION.

To the Editors of THE LANCET.

SIRS,—At the very important and interesting meeting of the profession held on Nov. 22nd in the College of Medicine, Newcastle-upon-Tyne, the discussion of a Midwives Bill occupied a prominent position. The question was dealt with almost exclusively from the medical practitioners' point of view. When Mr. Victor Horsley said, "The British Medical Association had dealt with the matter of the midwife and had introduced the first Midwives Bill," Dr. Cox of Gateshead, who has taken, and is still taking, a very prominent part in medical politics in this neighbourhood, cried shame, and there can be no doubt that he voiced the feeling of the meeting. The organisation of the profession for the mutual advantage of its members was prominently dwelt upon by nearly all the speakers. The organisation of the profession would seem to be another term for a medical trades union. It would undoubtedly be most advantageous if the profession could be better organised, but great care must be exercised by any such organisation not to run contrary to any movement which in lay public opinion is advantageous to the community. Thousands of women are annually attended by midwives, many of whom are ignorant, incompetent, or drunken, and none of whom are subject to control. Can this condition of things be to the advantage of the community? It is not proposed to put a stop to the practice of midwifery by midwives—it could not be done. Why should not these women, who cannot be got rid of, be registered and controlled? It certainly would be advantageous if the poor could be attended by clean, sober, competent midwives. How can the profession consistently oppose a movement which has such a desirable object in view? How can the profession hope to prevent such an obviously excellent reform? I am, Sirs, yours faithfully,

SURGEON.

THE DUKE OF PORTLAND AND THE NOTTS SANATORIUM.—At a meeting of the Executive Committee of the Nottingham and Notts Association for the Prevention of Consumption held on Dec. 1st the report of the Sanatorium Sub-committee was read. A site had been selected near Mansfield and the Duke of Portland had most generously consented to sell 50 acres of land to the association and to hand over the purchase money as a donation to the association's funds. It was agreed that owing to the many calls on charity at the present time no appeal for money towards building and maintenance should be made at present; but the committee decided that they would take every means in their power to make the objects and work of the association known. The subscription is 5*s.* per annum and the honorary treasurer is Mr. William Hodges, Messrs. S. Smith and Co.'s Bank, Nottingham, while the honorary secretaries are Mr. Ernest W. Enfield, Burton Joyce, and Dr. W. B. Ransom, The Pavement, Nottingham.

THE PUBLIC HEALTH OF DUBLIN:

A MEASLES AND TYPHOID FEVER EPIDEMIC.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

MUCH as there is to be done in respect of the housing of the poor, the improvement of domestic and of public drainage, the scavenging, the disposal of sewage, the notification of disease, the provision of isolation hospitals, and the proper and strict inspection of dairies and of food-supply generally, still, all these public works and all this administrative control will not suffice to save such a town as Dublin from epidemics unless the private life and habits of the people themselves are fundamentally altered. There is much that needs improvement with regard to all the public administrative problems just enumerated; but, above all, it is necessary to educate the people so that they shall appreciate the usefulness and the necessity of the measures which are taken on their behalf. Sanitary reformers have had to face the same difficulties in England and there are still large sections of the population of England whose intelligence and conscience have not yet been awakened by the gospel of cleanliness. But the state of affairs is much worse in Ireland, and we do not find in Ireland that determination on the part of all public institutions to set an example. On the contrary, appalling descriptions have been given to me of the state of filth which prevails in some of the industrial schools or reformatories. Nor are the ordinary schools conducted in such a manner as to teach by precept and example the doctrine of cleanliness. Then as Ireland is mainly an agricultural country, the people who are brought up in small villages and rural districts learn nothing about domestic drainage, and come up to the larger towns having no knowledge whatsoever of, for instance, the mechanism of a water-closet. Thus it will be found, even in Dublin, that there are benighted people who will use the coal-hole or the dustbin much in the same manner as the manure heap outside their country cottage or farm—indeed, a very large section of the population have evidently no conception of the disease germ. They do not seem to realise that pathogenic germs are often to be found in connexion with human dejecta, and that, in a great measure, sanitation consists in rendering such dejecta harmless; hence it not infrequently happens that a maidservant will use the same pail to bring up clean water to the bedrooms which she employs to take down the slops. It is of little use to provide the town with a supply of pure water if that water is carried about in pails that have been polluted by the slops that have been removed from the bedchambers. This, I am assured by more than one housewife, is of frequent occurrence. Maidservants are apt to consider the use of separate pails—one for clean water and the other for slops—as extra and unnecessary trouble and a mere fad on the part of the lady of the house. So, also, in regard to cooking, the greatest carelessness prevails as to the utensils employed. The receptacle which has served to wash the foulest of linen will also be used to wash potatoes and other vegetables. The "Whiskey Grant or Remission of Excise and Probate Dues" was especially "earmarked," with an indication that the saving thus effected was to be devoted to technical education. Household training as a branch of technical education was provided for by the "Whiskey Grant," and the fact that this provision was made may be taken as evidence tending to prove the existence of the grievance. But the grant has not yet been efficaciously employed for the purpose indicated.

In Germany, when a young women has concluded her ordinary education she is very generally made to go through a certain course of training in domestic matters, so that she may become a good housewife. Something of this sort is much needed in Ireland. The barbaric uncleanliness that may too frequently be noted is in itself a fruitful cause of the spread of disease. Thus, more than one person has assured me that many women do not wear diapers during their periodic indispositions and they consequently not infrequently stain the floor of the houses in which they dwell. When reproached they will answer that it stops the flow to wear anything. On the other hand, it is not customary to scrub the boards. The floors are only wiped with a wet rag. This cannot have the wholesome antiseptic action that is produced by scrubbing the floors of the rooms and especially of the kitchen with soap and a hard brush. It is very difficult to get the floors properly and frequently scrubbed in Ireland. The good old English custom of spring cleaning is not carried out, in any case to the same extent as it is in England. The habit of bathing and of personal ablutions is not so widespread, and many of the poor sleep in their day clothes. Of course, I am well aware that similar carelessness and dirty proclivities are complained of in England, and I should indeed be sorry if it were thought that I wrote with any sort of prejudice against the Irish, for I have had many opportunities of appreciating the numerous excellent qualities of the Irish people. But there can be no doubt whatsoever that however dirty the English may be, the Irish are still more dirty. Then again, while repudiating all racial prejudice I am equally anxious to be impartial in regard to religious matters, but I have to deal with facts and it does seem to be a fact that the Protestant sections are, on the whole, cleaner than the Roman Catholic sections of the population. Doubtless this is due to racial rather than to religious differences, the Protestant sections being more Scotch and English than Irish in descent, but whatever the cause the fact remains. Now it surely would be to the interest of the Roman Catholic party to take such measures as would raise them from this condition of inferiority. If bath- or douche-rooms were provided in every Roman Catholic school, if every child were made to take a bath once a week and to wash thoroughly every day, if a few popular lectures on sanitary and domestic matters were periodically delivered in all educational establishments an immense amount of good would result. The cleanly habits thus engendered during childhood would survive in after life. But it is not only necessary to teach the children, reform of the adult population is equally needed. For instance, inspectors are appointed, notably to visit dairies, but an inspector should commence by inspecting himself. A member of the National Health Institution recently investigated the matter in Dublin and having met a few dairy inspectors declared that some of these inspectors could well be certified as qualified to infect any dairy that they might visit. A German resident in Dublin has protested that some of the dairymen, market-men, and others who are connected with food-supply, and who are in the habit of sleeping with their clothes on, were so dirty that in Germany they would have been arrested and washed by the police. In Germany it is a very general custom for domestic servants to go out once a week and take a hot bath; but this is not done either in England or in Ireland and the condition of servants' bedrooms both in England and in Ireland is often such as to facilitate the spread of disease.

Of course, where there is poverty there will be squalor and dirt. If this is more than usually apparent in Dublin it is because there is more than usual poverty and it will be argued that this is neither a racial nor a religious, but a purely economical, question. Nevertheless, and though economical forces have much to do in producing the present deplorable state of affairs, it seems also evident that the educational system is much to blame. Soap and water are cheap and the dirt that produces disease is a real extravagance. There is much that goes to show that those who are responsible for the education of the young have not done their duty in respect to inculcating habits of cleanliness. In this respect Ireland is behind the age, and this is a prolific cause of disease. For instance, a gentleman was explaining to me that he was about to remove from his house because it was near to some tenement dwellings. The inhabitants of the upper floors of these tenements, rather than go downstairs to the closet placed their dejecta in a piece of paper and threw them out into the street. The soil often fell into the area of my informant's house. He had complained to the authorities, the police had visited the tenement house in question, the nuisance had been abated for a month or two, then the old filthy habits were renewed. The fear of dirt and the horror of bad smells have not been engendered in the minds of the people. Education is deficient in this respect, and this defect is not wholly confined to the extremely poor.

Now that public opinion is thoroughly alive to the danger of the present situation, that the high death-rate conclusively proves that things are not as they should be, this is a good opportunity for preaching once again the gospel of cleanliness. To blame the Government does not suffice. To find fault with the administration, and to point out all manner of necessary improvements is all well and good; but first and foremost the people themselves must receive a better education in cleanliness and sanitation.

Dublin, Dec. 4th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Viceroy's Visit to the Plague Districts.—The Progress of the Epidemic.—The Bombay Improvement Trust Scheme — The Failure of Lustig's Curative Serum in Plague —The Typical Course of a Plague Outbreak in a Large City.—Report of the City of Calcutta for 1898–99.

THE Viceroy's tour of the plague and famine districts, and especially his visit to the various plague hospitals, appears to have been greeted with great enthusiasm. Being a ready and apt speaker his public utterances have been very warmly received and his visits seem to have created an enormous amount of good. As an example for the people to protect themselves by inoculation His Excellency explained the reasons which had induced him to submit to the operation and there is little doubt that his sympathetic remarks and his appreciation of the value of inoculation will give a great impetus to its further employment. Fortunately the amount of plague seems to be nearly everywhere diminishing. The weekly statistics ending with Nov. 11th show that 2939 deaths occurred over all India against 3971 in the previous week. The decline was shared by all the provinces. Unfortunately no report is made about its prevalence in the Hyderabad State where apparently it has been raging somewhat severely for several weeks past. A few sporadic cases continue to occur at Karachi and the general mortality in Bombay keeps considerably above the average. No further case is reported from Rangoon and Poona is nearly clear. In Calcutta fewer plague cases are reported, but a large number of suspicious deaths continue to be discovered.

The Viceroy inaugurated the first improvement scheme in Bombay. This involves an area of about 12 acres with an actual density of the population of 833 persons to the acre. The whole area will be reconstructed. Model dwellings will be built in blocks and every block will front a street. Every room is designed with a standard capacity of 480 cubic feet per head. The displaced population will be accommodated elsewhere. The other chawls to be constructed outside the above area will be arranged in the form of a quadrangle with an interior courtyard and there will be only three storeys. The density of the population has been limited to 500 per acre. Every room will be 12 ft. × 10 ft. × 12 ft. and good bath-room and sanitary accommodation will be provided. The construction of new roads and dwellings brings the estimated expenditure at over 26 lakhs. As to the financial return which will be derived from the letting of the new dwellings it is fully expected that there will be a loss, as the people whom it is intended to benefit cannot afford to pay a rent which would yield a profit. As the essential point is to ameliorate the dreadful conditions in which the poorer classes exist in Bombay any financial loss which may be involved in this first step must be faced with equanimity. This is only an instalment of the large scheme for the reconstruction of the most dense parts of the city of Bombay. It is now time that the city of Calcutta awoke to its terrible state also. The population is, perhaps, not so dense on a given area of ground because the houses are for the most part low, but their insanitary state is as bad as those in Bombay and the whole place reeks with filth. A reconstruction scheme is wanted as much for Calcutta as it is for Bombay.

The claims of Lustig's curative serum for plague have now been conclusively answered by the official reports of Captain L. F. Childe, I.M.S., and the Surgeon-General at Bombay. The serum has now been well tested and the series of cases "gives practically no indications that the remedy would prove efficacious on further trial." The case-mortality under the serum treatment was found to be 69·7 per cent., but this is no better than the results of ordinary therapeutic measures, as exemplified by 8998 patients treated without any selection in certain of the best-organised plague hospitals at Poona, Karachi, and Bombay. The great source of error in these experiments was *in the selection of cases*, and it appears that the official report does not sufficiently point out this fault or show how this selection tended to improve the serum results. Two classes of patients did not receive the serum—viz., those who were obviously moribund and those whose symptoms were mild. It is true that the exclusion of the latter went against the results of the treatment, but it must be remembered that very few cases are mild and therefore their exclusion could not have greatly affected the issue. On the other hand, the exclusion of the moribund cases means perhaps more than the term would seem to imply. Cases on admission which were so bad as to be not likely to recover under any treatment were apparently left alone. It is stated, for example, that out of 148 cases treated only 30 received the serum on the first day of the disease. Now we know from the records of the chief hospitals that over 30 per cent. of the admissions die within 24 hours. The majority of these are more or less moribund on admission. It is obvious, therefore, that the exclusion of these cases and the application of the treatment to "cases of average severity, that is to those who seemed to have a reasonable chance of recovery," is manifestly in favour of obtaining good results from the treatment. And yet the final results as shown above only equal the ordinary methods of treatment. At the hospital where most of the experiments were conducted it is fair to add that the general mortality was higher, but the difference even with the above selection of cases does not exceed 10 per cent. Another point worth noting is that 30 of the 148 cases were treated on the first day of the disease and yet the mortality amongst them was higher than amongst the others, and, as Captain Childe says, "it is an axiom in serum therapeutics that the earlier the treatment the more favourable the prognosis." These facts point to the conclusion that Lustig's serum as manufactured by his representative, Dr. Galliotti, has not much influence on the course of plague. It was found in many cases that the temperature fell one or two degrees shortly after the injection of serum, and that with this fall there was a corresponding improvement in the patient's general condition; but this improvement was only temporary and the general course of the disease was steadily from bad to worse. In all cases at the Arthur-road Hospital a stimulant (rum) was given every two hours, and in cases which showed symptoms of heart failure cardiac tonics were also administered, such as digitalis, strychnine, strophanthus, and caffeine.

A comparison of the general mortality chart for Poona during the recent severe outbreak of plague with similar charts for Bombay during each successive outbreak reveals an extraordinary similarity. After a high mortality-rate for several months there occurs in each case for a few weeks a sudden and still further increase. This culminates in what may be termed the first maximum; then there is a slightly fluctuating very high mortality-rate for about six weeks ending in a second maximum; then comes a fall as rapid as the rise. The outline of the declining curve is very similar to that showing the rise. Just as the initial rise was gradual so the fall, rapid at first, becomes gradual as the outbreak declines. The sudden rise and the sudden fall with a terribly high maximum between lasting about six weeks is very characteristic. The chart showing the abortive outbreak in Calcutta this year is also exactly the same. This course must be something more than accidental. So far its regularity appears applicable only to large cities. Unless this normal course of a plague outbreak be taken into consideration all inferences or calculations about the effect of sanitary measures are worthless. How frequently, for example, do we see in reports that such-and-such steps were productive in stopping the further spread of the disease, while the explanation really is that the outbreak was running its course and when the particular measure came to be adopted it was in its natural way declining.

The administration report for the city of Calcutta for 1898–99 has just been published. The vital statistics are said to have been complicated by the large exodus. The year was a healthy one except for plague and was not marked by the outbreak of any epidemic. The birth-rate was exceptionally low, being only 13·9 per 1000, against the average of 17·92. It must be remembered, however, that there is a small proportion of females in Calcutta (about 1 in 3) and that it is the custom among women to return to their native place in order to give birth to a child. The fear of plague probably accounted for this year's low rate. The death-rate was 29·8, as against the average of 34·80 per 1000. It is curious to note that the canal and suburban area had a much higher mortality—viz., 35·5 per 1000. The figures concerning infant mortality are extraordinary. This is always high in Calcutta (the average being 437·5 per 1000), but this past year it was only 368·5 per 1000. It is, however, nearly double the provincial rate. Among the Mohammedans it stands at the enormous figure of 634·5 per 1000; why this should be so is not even conjectured. The mortality from fevers would appear at

first sight to have largely diminished, but it was found that deaths from fevers were registered as due to other causes and improvement can therefore hardly be counted upon. Vaccination seems to have been greatly hindered by the fear of plague, some of the vaccinators having been mobbed as inoculators and the work having been almost suspended for three months. During the year an attempt was made to transfer the Conservancy Department to the charge of the engineer. This was not found to work and was soon altered. The introduction of an afternoon in addition to the morning conservancy service has effected a considerable improvement in the state of the streets, but even now in the by-streets and lanes the amount of filth is disgraceful. Plague is barely referred to in the report because by orders issued under the Epidemic Diseases Act of 1897 measures for the prevention and extirpation of plague in Calcutta are entrusted to the chairman alone, assisted by a special staff, and are not subject to the control of the City Commissioners.

The Bacteriological Institute in Ceylon will be formally opened by the Governor shortly after his return to the island. The institute has been presented to Government by Mr. J. W. C. de Soysa.

Nov. 26th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of Tuberculosis.

IN response to a letter from the Secretary to the National Association for the Prevention of Consumption and other Forms of Tuberculosis the Manchester City Council, at the meeting held on Dec. 6th, appointed Alderman Walton Smith and Alderman McDougall (chairman and vice-chairman of the Sanitary Committee) to represent the corporation at the preliminary conference to be held in London on Dec. 18th under the presidency of the Earl of Derby concerning the Sanitary Congress which it is proposed to hold in the spring of 1901.

Manchester Ear Institution.

The annual meeting of the subscribers to the Manchester Ear Hospital, as it is now styled, was held in the Lord Mayor's parlour on Dec. 6th. The report stated that the medical staff were unanimously of opinion that more room was required for the hospital work and the committee decided to utilise additional rooms in the present building now in the occupancy of a medical man when they come into the possession of the hospital in March next. The work of the hospital gradually increases and that of the in-patient department especially has caused considerable pressure at times on its space and administrative resources, so that the necessity for increased accommodation and for additional nursing assistance has been matter of serious concern to the committee. It is thought, indeed, that the time is not very far distant when the question of a new hospital specially adapted to modern needs will have to be considered. The receipts during the year amounted to £786 and the expenses to £722, leaving a credit balance of £64, a position somewhat exceptional among the Manchester hospitals.

Lamp Fatality.

Mr. Smelt, the city coroner, held an inquest on Dec. 1st on a mother and son, aged respectively 33 years and two and a half years, who died at the Ancoats Hospital from burns caused by the upsetting of a paraffin lamp. The mother of the deceased woman gave evidence that she and her daughter and the husband of the latter were all drunk and that the husband accidentally knocked the lamp over. Another witness was passing and saw the house in flames. An alarm was given and a fireman got through the kitchen window. The child was dropped from the bedroom window into the arms of some men in the street and the woman seems to have jumped through the window. The ethical notions prevailing among a large proportion of the population of Ancoats are well illustrated by the evidence of another woman living in the same house. She said she had never known the man and his wife to quarrel, "though 'of course' they did get drunk." "Why of course?" said the coroner. "Well, I know I do, and I expect everybody does the same." A verdict of "Accidental death" was returned but the man was afterwards charged at the City Police-court with manslaughter and remanded for a week on bail.

A Coroner on Flannelette.

The warnings of the Manchester city coroner on the dangers of flannelette clothing have been mentioned from time to time and Mr. Butcher, the coroner for Leigh, again cautions people, the poor especially, as to its danger. At an inquest held on Dec. 5th concerning the death of a woman who was fatally burned a few days previously he said that he "must once more call attention to the terrible disasters that were frequently occurring through the use of flannelette clothing. A large percentage of lives might have been saved had people preferred woollen fabrics to flannelette." The comparative cheapness of the latter is no doubt the main cause of its popularity, but if people will wear it they should take special precautions against fire and ought not to leave little children to their own devices.

Dec. 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Morison Lectures.

THE Morison Lectures are to be delivered this year by Dr. Byrom Bramwell on Dec. 18th, 20th, and 22nd, in the Hall of the Royal College of Physicians of Edinburgh. Dr. Bramwell's subject is to be "Aphasia."

Edinburgh Health Society Lecture.

On Dec. 9th Professor J. Arthur Thomson, Aberdeen, delivered the fifth lecture of the session in connexion with the Edinburgh Health Society, taking as his subject, "Are Acquired Characteristics Inherited?" Professor Thomson stated as his belief that the scientific position towards this question at present should be one of active scepticism—leading on to experiment. Personally, he would give a verdict of non-proven for the affirmative with a strong presumption in favour of the negative side.

Royal Scottish Society of Arts.

At the third meeting of the Royal Scottish Society of Arts held on Dec. 11th Mr. J. B. Readman, D.Sc., read a paper on Food Preservatives. He had experimented during the hottest weeks of last summer with various food preservatives, employing milk as the food in the experiments. It was evident, he said, that boric acid was now largely used as a preservative for milk. The danger was lest boric acid and other preservatives should be excessively used. One specimen of milk might be several times treated before it reached the consumer. He found from his experiments that 20 grains of a 40 per cent. solution of formalin kept a gallon of milk palatable for eight days in hot weather. Investigations had also proved that while 35 grains of borax were required to preserve in winter one gallon of milk for two days five grains of a 40 per cent. solution of formalin had the same effect.

University of Edinburgh Faculty of Medicine.

A number of medical practitioners in the Straits Settlements, having presented to the University of Edinburgh a prize of the value of 25 guineas for research in tropical diseases, the Faculty of Medicine has determined that the prize shall be open for competition to students of medicine or graduates in medicine of not more than two years' standing; that competing essays shall be given in on or before April 30th, 1900; and that any essay containing original scientific or literary research on tropical disease shall be eligible for competition. The following are suggested as appropriate subjects of research, in order to aid candidates in their selection of a subject: (*a*) Investigation on the conditions producing attenuation and exaltation in the activity of plague virus and the relation of such changes to the symptoms of plague in man; and (*b*) the bearing of meteorological conditions on the incidents of tropical disease.

Glasgow University Club, London.

The half-yearly dinner of the Glasgow University Club, London, took place on Dec. 11th at the Café Royal, Regent-street, under the presidency of Mr. Charles Scott Dickson, Solicitor-General for Scotland. There was a good attendance and a very pleasant evening was spent, enlivened by selections of humorous anecdotes and music, vocal and instrumental. Haggis had a place on the bill of fare, coming immediately after "riz de veau Toulouse." The

toast of "The Guests" was proposed by Professor James Dewar, F.R.S., and responded to by the Right Hon. A. Graham Murray, Q.C., M.P. (Lord Advocate of Scotland), and Mr. T. D. H. Dickson of Peterhouse, Cambridge.

Epidemic Hospital for Carnoustie.

An epidemic hospital, at a cost of £2000, is to be erected for Carnoustie. The proposed site is at Pitskelly farm, which is offered by the Earl of Dalhousie at £12 an acre.

Dec. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Death-rate of Dublin.

THE death-rate for the week which ended on Dec. 9th was 42·4 per 1000, the mean rate being 28·3 and the zymotic death-rate 6·4.

The Irish Medical Association.

A meeting of the Council of the Irish Medical Association was held in the Royal College of Surgeons, Dublin, on Dec. 5th, at which was considered a report from the Committee of Council on the question of fees for medical attendance in connexion with the Poor-law service. The report was adopted, and from the replies received the Council believe that a fee of three guineas a week for a locumtenent would be generally accepted and would probably meet with the sanction of the Local Government Board.

The Belfast Medical Students' Association.

The opening meeting of this very flourishing association was held in the Students' Union, Queen's College, Belfast, on Dec. 8th. Mr. David McMordie, B.A., while a President for the current session, gave a very interesting opening address showing the value and importance of such a society as affording medical students a training in administrative work and speaking, and also as providing them with an organisation which had important external relations with the College Council, the staff of the Belfast hospitals, and the senate of the Royal University. He spoke of the great obligations they were under to Dr. W. A. McKeown, senator of the Royal University, for his unceasing efforts on their behalf, and he pointed out the anomalous position of the Belfast School of Medicine as represented on the M.B. examination board of the Royal University. 50 per cent. of the successful candidates, he said, came from Belfast, yet out of 12 examiners there were only two from the Belfast School, while a Dublin school with 25 per cent. of the successful candidates had five examiners. Dr. J. Lorrain Smith then read a paper on Medical Education, dealing with the great importance of the study of biological science, which he regarded as being as valuable a training as any other form of study. Professor Symington, Professor Lindsay, Dr. W. A. McKeown, Professor Thompson, Mr. Kirk, Dr. Mitchell, and Professor Byers spoke the on papers, after which a hearty vote of thanks was given to Dr. Lorrain Smith.

Memorial to Professor Cuming, M.D. R.U.I.

At a largely attended meeting of colleagues in the faculties of both medicine and arts and of other medical friends of the late Professor Cuming, held at Queen's College, Belfast, on Dec. 5th, it was resolved that some means should be taken to perpetuate the memory of the deceased professor, and it was decided that this end could be best secured by having a portrait painted for the Examination Hall. An executive committee was appointed. Professor Lindsay and Dr. James Graham (President of the Ulster Medical Society) are the secretaries and Professor Purser, LL.D., is the treasurer. Subscriptions are not to exceed two guineas.

Small-pox.

The outbreak of small-pox in Belfast has subsided, no new case having been reported since Nov. 13th. The Local Government Board recommended the erection of a small-pox hospital, but the guardians have declined to do so as this would involve that in order to obtain security from infection the hospital should be situated in the centre of a circle having a radius of a quarter of a mile, and it would not be possible to acquire such space.

Health of Belfast.

At a meeting of the City Council on Nov. 6th it was reported that for the last five weeks the death-rate was 21·9 per 1000, while for the corresponding period of 1898 it was 26·4 per 1000. The deaths from typhoid fever have decreased as well as the number of cases of that disease. The cases of scarlet fever are still very numerous, though the mortality is not high.

Royal Victoria Hospital, Belfast.

At a meeting of the General Committee held on Dec. 4th 15 life governors and 15 subscribers were elected on the Board of Management. That body will in the future consist of these 30 members, five representatives of the medical staff, and all the old life governors, who are really *ex-officio* members. Each year a third of the elected members are submitted to a vote of the qualified subscribers. Some discussion took place at the meeting in reference to the advisability of having two partners in the same firm on the Board of Management and two of those affected by the rule offered to stand out on the ground that it would be in the interest of the hospital to spread active participation in its work over as wide an area as feasible so that as many representatives as possible of important interests should be elected on the Board of Management. There can be no doubt that the Relations Committee have taken immense trouble in planning this elaborate scheme of the Board of Management; whether it will work any better than the system of the old Royal Hospital remains to be seen. It is understood that tenders will be asked for at the end of the present month and that a beginning will be made in the building of the New Royal Victoria Hospital.

Dec. 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Public Examinations for Hospital Appointments.

IN accordance with the note I sent you last week I forward some particulars of the various scandals that have arisen in connexion with the recent public examinations for the appointment of hospital resident medical officers. The students themselves have been much annoyed at learning that there would be only 36 vacancies to be filled for the year 1900 instead of 80. This fact naturally renders the examination much more difficult and there is apparently no reason for the diminution, as hitherto the number of vacancies has remained constant. As soon as the jury had been decided on by drawing lots the students entered a protest against two professors who, they said, were intellectually feeble.[1] The two questions in the paper also displeased the students, who found them remarkably difficult. They were (1) the superior maxillary nerve and (2) the complications of diabetes. Out of 540 candidates whose names were entered only 334 sent in their papers and of these 59 declined to read the paper when their names were called. There remained therefore 275 candidates who went through with the examination. A flagrantly malicious act has been committed, which still further modifies the conditions of this unlucky examination. The jury were accustomed to meet day by day at the Beaujon Hospital to hear the reading of a certain number of the candidates' papers; after each hearing the papers still remaining were placed in boxes sealed by the president himself and the boxes were then placed in the private room of the director of the hospital. A fortnight ago an unknown evil-doer got into the room during the night, and having bored holes in the boxes poured in some nitric acid through a funnel, thus destroying completely many of the manuscripts. As the main entrance to the room is through a passage where there are night watchmen on guard the miscreant must have got in by the other door the use of which has been given up and which opens into a little-used passage. Out of this door he cut a square panel at the bottom (so that only three sides had to be cut) with a thermo-cautery and crept through the hole thus made. The cautery, the funnel, and the gimblets with which he had bored the holes were found in the room. The marks of footsteps were found in the yard of the hospital leading up to a wall which the perpetrator of the act had evidently scaled in his flight. The act was committed between two and four o'clock in the morning and is supposed to have been the work of an unsuccessful candidate. Investigations up to the present have yielded no results and all the candidates who withdrew from the examination, as well as those who sent in inferior

[1] THE LANCET, Oct. 28th, 1899, p. 1198.

papers, have been summoned to the hospital, and with a view to making a preliminary weeding out of those who are possibly in fault the police commissioner is asking every candidate to pass through the hole in the door, which is too small to let anybody, except he be very slender, pass through. A very important matter is whether the examination will have to be held over again as a whole or whether only those candidates, 80 in number, whose papers have been destroyed shall be re-examined. Naturally enough the candidates who disagreed with the questions set want to have another examination held in the hope that easier questions may be chosen, but this course would be manifestly unfair to students who have already passed well and who might not be so fortunate another time, while it would be almost an incentive to similar acts of maliciousness in the future. The governing body of the Assistance Publique is going to meet to solve the difficulty, but whatever its decision may be it is evident that it will not please everyone and the general idea is that the dissatisfied students will carry the matter before the Conseil d'Etat, a body which takes a very long time to give its decision. One proposition which seems likely to be accepted is that the 36 vacancies should be divided proportionally among the 80 candidates whose papers have been destroyed and the others. The 80 candidates would have 10 places allotted to them and would have to go in for a fresh examination.

Dec. 12th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

On Tuberculosis of Short Duration and Infection with Dead Tubercle Bacilli.

ON Nov. 28th Professor Dr. Huguenin, late Professor of Clinical Medicine at the University of Zürich, lectured on this subject before the assembled medical men of the Canton of Zürich. He gave an interesting historical survey on experimental work of late years with regard to the action of dead tubercle bacilli and the proteids and toxins derived therefrom. He mentioned Mafuggi's interesting studies, which conclusively prove the existence of substances producing necrosis, inflammation, fever, and cachexia, and also an antitoxin substance capable of curing tuberculous animals when given in smallest doses. He spoke about the work of Strauss and Gamalaya which led them to arrive at the following conclusions. The dead bacilli are transported into the various organs of the body and can be found there by post-mortem examination and demonstrated by the characteristic staining and resistance to acids; though dead, they retain part of their pathological qualities. They are capable of producing true miliary tuberculosis with cachexia, but the infection is generally localised and the tendency to fibrous healing is great. Clinically, Professor Huguenin attributes many cases of disease affecting the apex of the lung only, of short duration and followed by recovery, to infection with dead tubercle bacilli. The evidence as to life or death of the bacilli can only be obtained by peritoneal infection of a guinea-pig with positive results, not by staining or by the acid test. In a dried condition the bacilli usually die in about a month, sometimes, however, living as long as from six to eight months, under influences of putrefaction in from eight to ten days; they can exist in snow at a temperature of 14°F. for as long as six weeks and are very resistant to heat, but most susceptible to direct sunlight, which kills them in from 20 minutes to three hours, and even in diffuse light they die in from six to eight days. They persist longest in human habitations under unfavourable hygienic conditions and there lies the greatest and gravest source of infection. An infection with dead tubercle bacilli causes the symptoms of bronchial catarrh localised in one apex of the lung, then infiltration accompanied by fever of several weeks' duration and rapid cachexia which terminates with the fever. The whole process is only of from five to six weeks' duration under proper climatic and other treatment. Tubercle bacilli can be found in the sputum for weeks and stained, but inoculation proves that we have to do exclusively with dead bacilli and not with living ones (sputum of phthisical patients infected with live tubercle bacilli always contains at least from 10 to 15 per cent. of living bacilli). Complete recovery may ensue, and Professor Huguenin has watched such cases for from six to seven years, the residual symptoms being those of a cicatrix in an apex. No spreading of the disease is possible, as dead bacilli do not multiply. No infections of glands and secondary infection with cocci, &c., were ever observed. In the post-mortem examination of one patient who died from cancer there was but a commonplace scar in the apex of one lung, such as might be due to many other causes (streptococcic invasion, &c.). A pupil of Professor Huguenin is continuing this experimental investigation which is of great practical value as regards prognosis.

Zürich, Nov. 28th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Health of the Pope.

I HAVE already referred to the Holy Year, in the august ceremonies of which Leo XIII., as I have more than once indicated, looks forward to taking a part out of all proportion to his energies, mental and physical, marvellous as these undoubtedly are. On his "onomastico" (name-day or feast of S. Joachim), which he celebrated *en famille* last August, he talked of little else to the distinguished company he had invited to his library. Curiously enough, the last Holy Year, that of 1825, had for its chief celebrant his predecessor in the style he adopted on the pontifical roll—Leo XII. (Annibale della Genga), and he himself as a young student in divinity at the Collegio Romano was deputed to deliver the address of that learned body to the Holy Father. This he did admirably well, and from the hands of the Pope he received the medal specially struck for the occasion—a token he had much pleasure in showing to the guests who had come from all parts of the world to congratulate him on his "onomastico." He little thought (so he remarked to them) that just 50 years after the decease of Leo XII. he was himself to be Leo XIII. and to celebrate his name-day in 1899. Warming with his theme he entertained his guests with reminiscences of the Holy Year of 1825 and dwelt particularly on the spectacle which he had witnessed of Leo XII. walking in procession bare-foot (except for a sheet of white paper under his soles) to the various basilicas and granting indulgences to crowds of the faithful assembled in them from all Christendom. This, he said, he could not in present circumstances perform himself; but short of that he contemplated intervening personally at all the great functions of the year. Indeed, the programme he thought of carrying out filled his audience with admiration and misgiving—admiration at the devotion and energy which he revealed, misgiving at the all too exacting rôle he was imposing on his 90 winters. Dr. Lapponi, perhaps the most interested of those present, has, ever since that day, been insisting on the Holy Father sparing himself as much as possible, if only to be physically equal to the commencing function of the Holy Year—that of demolishing the Porta Sancta of St. Peter's with three strokes of the silver hammer on Christmas Eve. That insistence was, on Dec. 5th, more than justified when he found that his venerable patient was suffering from the initial symptoms of bronchial catarrh, with febricula, hoarseness, and cough. Dr. Lapponi at once ordered him to bed, postponed all receptions, audiences, and business, only promising that if on Sunday the malaise had yielded, as he expected, to the treatment adopted his patient would be allowed to rise and say mass in his private chapel. *Detto fatto* (said and done). The Pope responded so well to the prescriptions that on Friday (Dec. 8th) he was able to celebrate mass in his bedchamber, assisted by his body attendants, by his nephews Camillo and Lodovico, by the Count Moroni, and by the Commendatore Dr. Lapponi. Late last night, moreover, I was informed that his condition "continua ad essere soddisfacente." Extreme care must, nevertheless, be still the Pope's rule, especially as the season has suddenly become very wintry, with snowfall in Upper and Central Italy and the tramontana coming down, sharp as Shylock's knife, from the Apennines.

A British School in Rome.

Medicine, like divinity and law, cannot but respond to the appeal addressed to the three sister professions in aid of a British school in Rome. If the origin and development of the Church and of the Corpus Juris Civilis have had much light thrown on them by the archæological institutes established and maintained in the Eternal City, the healing art in its turn has, thanks to the same schools, learned much,

and may yet learn more, as to its most interesting and instructive past. Great Britain, which for 13 years has had an institute of the kind in Athens, has in this department allowed her continental sisters to get the start of her in Rome. Germany, or rather Prussia, exactly 70 years ago, with her Archäologisches Institut on the Capitoline, took the lead in this direction, a lead which she still maintains in the variety and excellence of her work. Italy, or to speak more truly, the Vatican, has in Rome a flourishing Accademia d'Archeologia. France also has a well-equipped institution for this branch of study, and the same may be said of Austria-Hungary and the United States of America; but Great Britain alone, with resources equal to those of all her sisters combined, is still without archæological representation in the city of the Cæsars. From such "isolation" (by no means "splendid"!) she will shortly, however, be emancipated, and a committee *ad hoc* composed of leaders in historic and archæological study at the universities and throughout the empire is appealing to the English-speaking world for help. One of its members is Dr. Clifford Allbutt, Regius Professor of Physic in the University of Cambridge, and others of our profession, hardly less distinguished, will, I doubt not, contribute, if not their names at least their active support, to the undertaking. Medicine, as I have indicated, has still much to learn as to her position under the Roman sway, regal, republican, and imperial; and not only from the unearthing of monuments, the interpretation of inscriptions, and the discovery of instruments belonging to the medico-chirurgical "armamentarium," but from the better collation of manuscripts like those of Celsus in the Mediceo-Laurentian and Vatican libraries, much illumination may yet be elicited. Indeed, the text of the "Roman Hippocrates," even after the recension of Daremberg, is, as that consummate Cambridge scholar, Dr. H. A. J. Munro, maintained, by no means what it might be made—palæography having become a much less imperfect science since 1859 when Daremberg's edition was published at Leipsic. Other medical authors under the empire yet await textual rehabilitation and illustrative commentary, and in this field alone a British school in the Eternal City has the strongest claims on the support of the profession. The coming year will not, I hope, have run through many months before that school, as a *fait accompli*, has met a want too long felt and removed a stigma too long conspicuous.

Italian Studies in Malaria.

The Marchese Giustino Fortunato, a member of Parliament who has distinguished himself in more than one branch of physical research, well known, moreover, for his active interest in public hygiene, presides over a Society for the Study of Malaria. Its headquarters are in Naples and among its members are Signor Leopoldo Franchetti, also a member of the Italian Chamber of Deputies and an energetic promoter of the reclamation of marshlands and of agricultural extension, not only in Italy but in her Red Sea settlement, the Erythrea; and Dr. Angelo Celli, who likewise has a seat in the Chamber and holds the chair of Experimental Hygiene in the University of Rome. Under their auspices there will appear within a few days the first of a series of volumes intended to encourage and diffuse the study of malaria in all its phases, medical, sanitary, and economic. This first volume will contain monographs by Dr. G. B. Grassi, Professor of Comparative Anatomy in the University of Rome; Professor Angelo Celli, above referred to; Dr. Amico Bignami, Professor of Pathological Anatomy also in the Roman School; Dr. Dionisi of the same city, whose work, conjointly with that of Professor Bignami, is already known to readers of THE LANCET[1]; and many others. Besides its scientific attractions as embodying much independent and painstaking research, the volume will have a polemical interest, mainly from Pofessor Grassi's claim to priority in establishing the connexion between malaria and the mosquito.

ntravenous Injection of Corrosive Sublimate in Pestis Bubonica.

His Excellency the Minister of Public Instruction, Dr. Guido Baccelli, who, I am sorry to say, is at present confined to the house by indisposition (happily not grave), has been following up his practice of intravenous injection of the sublimate in other maladies besides malarial fever. In this the good results obtained have been also realised in syphilis, in "charbon," in puerperal fevers, in erysipelas, and even in the cerebro-spinal forms of influenza. Now he has been applying the same method, with the same remedial agent, to pestis bubonica, having first insisted on its claims at the recent sittings of the Consiglio Superiore di Sanità. The experiments preliminary to its application to the human subject have been entrusted to Professor Terni of the University of Messina who, under Dr. Baccelli's direction, has treated on the lines indicated a large number of animals (guinea-pigs, rabbits, &c.) previously inoculated with pestis bubonica and has obtained excellent and unvarying results. In fact, Professor Terni has set out for Portugal (*en route*, later to Brazil) to make known his experiments, with a view to its adoption in the human subject. He hopes, I understand, to have as much success with the intravenous injection of the sublimate in plague as he has already witnessed from the similar injection of carbolic acid in traumatic tetanus—another innovation of Dr. Baccelli, which has proved superior to Tizzoni and Centanni's serum in reducing the fatalities from that disease—fatalities previously amounting to 80 per cent.

Dec. 10th.

[1] THE LANCET, Feb. 11th, 1899, p 388.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Precautions against Plague.

THE Premier of Hungary has recently ordered that every case in which there is a suspicion of plague should be immediately notified to the respective municipality. The municipalities again are ordered to arrange for speedy isolation and notification of the case immediately by telegraph to the Government so as to enable the latter to carry out all necessary measures for stamping out the disease. Fortunately no case suspected to be plague has up to the present occurred in this country.

Inoculation of Normal Nerve Substance against Hydrophobia.

This subject has been dealt with by Dr. Anjeszky of the Budapest Pasteur Institute. Some time ago Professor Babes of Bucharest tried to shake the belief in Pasteur's proceedings by demonstrating that normal nerve substance introduced into the circulation of dogs and rabbits has the power of protecting these animals against hydrophobia supposing that plenty of nerve substance had been introduced and the virus of hydrophobia employed be not too strong. Dr. Calabrese of Naples, on the contrary, found that the normal nerve substance has no protective power whatever, and more than that, he found that the power of resistance of the animals experimented upon diminished under these inoculations. Dr. Anjeszky, who has made a series of experiments to elucidate this question, succeeded in confirming the views of Dr. Calabrese and holds that the mistake of Professor Babes was possibly due to the virus of hydrophobia employed by him having lost its toxic properties.

Experiments with the Diazo Test.

This test, which was first introduced as a clinical method by Dr. Ehrlich in 1882, has since that time been the subject of much controversy among writers on medical subjects. Dr. Hoenig, who had tried this urine test in a series of patients suffering from typhoid fever, has come, after careful study, to the following conclusions: (1) the diazo test might be found positive occasionally in different diseases, but in typhoid fever it is always positive; (2) the degree of the reaction is independent of the patient's temperature and seems to be in close connexion with the state of the bowels; (3) an increased degree of the reaction may be taken as the sign of increased danger for the patient; (4) if the test turns out negative in patients where it had been positive one may foretell an improvement in the symptoms at a time when there are as yet no other signs of it; and (5) this test is more easily carried out and more pathognomonic of typhoid fever than the test of Gruber-Widal.

The Decrease of Medical Students at the University of Budapest.

The fact that a medical career does not appear very tempting in Hungary is best shown by the steady decrease in the number of medical students. The number of young men entering on the study of medicine in Budapest was 219 in 1890, 166 in 1891, 177 in 1892, 187 in 1893, 170 in 1894, 150 in 1895 111 in 1896, 131 in 1897, 126 in 1898, and 117 in 1899.

Dec. 7th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Quarantine and the Mecca Pilgrimages.

THE statistics of this year's pilgrimage on its return from Mecca have now been published. The faithful arrived at the quarantine station of El Tor on various dates between May 3rd and August 31st and numbered 13,269 persons. Of these 211 died at Tor, but their numbers were increased by one birth, while they were undergoing quarantine. The boats which conveyed the pilgrims were all flying the English or the Turkish flag and sailed from Jeddah, with the exception of a few which started from Yambo. The arrivals at Suez after undergoing quarantine extended from May 19th to Sept. 15th. To anyone who knows the miserable condition of some of the pilgrims it is satisfactory to note that the deaths while under observation were only 1·7 per cent.

Preparations for the Season.

Now that there is no plague or other epidemic disease in Egypt, the hotel keepers are anticipating a good season and have already welcomed many visitors. There is surely no winter resort which has better hotels than Cairo, because the various owners compete in a friendly way with each other to provide comforts for the English and American tourists. For instance, one of the best known hotels here prides itself upon spending £1600 a year on improvements, besides an occasional outlay of larger sums for expansion and development. This winter the additions consist of practically a new garden, with a large balcony leading to it from a beautiful Moorish hall, flanked by grill room, bar, and billiard tables. There is also a new wing consisting of six flats cut off from the rest of the hotel, facing south and west, with many fireplaces and balconies. This raises the total number of bedrooms from 360 to 400, now, like many other Cairo hotels, provided with luxurious furniture from England. The manager has also shown me a new electric engine and boiler providing for 3000 lamps and also for a laundry which can wash 6000 articles daily. This also works a sterilising stove for carpets, curtains, and bedding from any room which has been occupied by a guest suffering from phthisis, influenza, &c. This is used when a medical man or the hotel housekeeper thinks fit and facilities are all the more easy because it causes no expense and but a minimum of trouble. I hope the day will come when other large hotels will introduce this reform. The best hotel site in Cairo has been occupied since 1869 by the large building erected by the Peninsular and Oriental Company for the opening of the Suez Canal when it was filled with Ismail Pasha's guests. During the summer months it has changed owners, has been re-christened, and has had £52,000 spent upon it in building and general sanitary and other improvements. The bedrooms have in consequence been raised in number from 150 to 300, and of these 130 face due south. More than half the rooms now have fireplaces, while every one has a balcony and electric lighting is everywhere. The best verandah faces east and measures 2000 square yards, looking out on the large Opera-square and on the Ezbekieh-gardens, which have recently been considerably improved. Here, again, English furniture is paramount and in the new wings of the hotel the water-closets have been cut off by a passage from the main building. On every floor there is a public sitting-room for receiving callers, besides public balconies facing in all directions. Lastly, 50 tons of water are kept on the roof in case of fire and every floor is provided with hoses, &c. I must be content with giving these two instances in Cairo, though many of the other hotels have also employed the summer months to advantage. Two new dispensing chemists have opened shops under English management and a second English nursing home is prospering deservedly. The hotel at the Pyramids has made some changes and can now be easily reached by an electric tramway. There are three rival companies competing to take visitors up the Nile, and Assouan, always growing in importance, has now two new hotels and in a few weeks will boast of an English church.

Cairo to Khartoum.

There are now various ways of making this trip which are rendered all the easier for this season by Sir F. Wingate's total destruction of the Khalifa and all his followers. The visitor may go by rail or steamer to Assouan, then by steamer to Wady Halfa, and again by train to Khartoum, where he will soon find a hotel large enough for 60 people. Those who are pressed for time can do the journey in three days, while those with leisure will be tempted to take a steamer trip through the Shabluka Cataract to see the battle-field on the Atbara river.

Helouan Baths and Hotels.

The new bath establishment is now complete and can be safely recommended to those who would pay a winter visit to the Eyptian Aix-les-Bains. The directors have tried to make the new baths superior even to Harrogate and other modern resorts in Europe. The old baths which look very dirty by the side of the new ones will be continued for poorer patients. The new baths include immersion, douches of all kinds, steam, hot-air, electric hot-air, faradaic, galvanic, and sitz. Then there is the Berthe bath which allows hot air or steam or any drug to be applied to any part of the body, and also the special Helouan bath which permits the patient to be immersed in running sulphur water at any required temperature while any amount of massage can be simultaneously carried on. The two principal hotels have undergone a change of management with the special view of making them more attractive to English and American visitors. Also a new hotel is now being opened which, planned by an English medical man, is intended to surpass all others in Egypt by providing extra necessaries for invalids. The late Khedive's Palace has had a large wing added to it so that there are now 70 bedrooms, of which 24 face towards the south-east. The rooms and passages are provided with radiators, so that the occupants themselves can regulate the temperature of the air. Every passage has five ventilators to the roof, the rooms are liberally furnished with balconies, and special arrangements are in progress for allowing invalids to take air-baths on the roofs. The sanitary arrangements seem to be simple and satisfactory. The baths empty on one side of the hotel into drains and the water-closets on the other. The drains converge eventually and end in a cesspool 100 yards away in the centre of a very large courtyard surrounded by stables, servants' rooms, electric engines, and the laundry. The property comprises eight acres and is surrounded on three sides by pure desert air under the best possible circumstances.

Cairo, Dec. 5th.

Obituary.

EDWARD HAMILTON, M.D. DUB., F.R.C.S. IREL.

MR. HAMILTON'S advanced age and the many important positions which he has filled made him a conspicuous figure in professional circles in Dublin, and the announcement of his death aroused a feeling of bereavement in the minds of numerous attached friends. The deceased gentleman, who was in his seventy-sixth year, passed away on Dec. 5th at his residence in Stephen's Green West. Educated at Trinity College, Dublin, he took the A.B. degree in 1845. His medical qualifications were obtained in 1846, when he graduated as M.B. and received the licence of the Royal College of Surgeons in Ireland and the Apothecaries' Hall, Dublin. In 1852 he was admitted to the Fellowship of the College of Surgeons, and graduated as M D. at Trinity College in 1860. At different times Mr. Hamilton held appointments at a number of hospitals, both obstetric and general. Among these may be mentioned the Coombe Hospital, Mercer's, and Sir Patrick Dun's. He was also at one period physician to the General Dispensary. The reputation which he made in these various fields of work, as well as during his early career at Trinity College, plainly marked him out for further distinction. As lecturer on anatomy in the Peter-street School of Medicine he showed talent for imparting instruction to students and as professor of surgery to the Royal College of Surgeons in Ireland he dealt with more advanced subjects with equal ability. His principal hospital appointments were those of consulting surgeon to the Dublin Orthopædic Hospital, consulting surgeon to the National Lying-in Hospital, and surgeon to Steevens's Hospital. In 1876 he had the honour to be elected president of the

Royal College of Surgeons in Ireland and he was a second time raised to the same dignity in 1893. An appointment as surgeon-in-ordinary to the Lord Lieutenant was a conspicuous testimony to the appreciation of his professional ability and personal merits entertained in society. Mr. Hamilton was also an ex-president of the Irish Medical Association, a member of the Royal Irish Academy, and medical adviser to the Dublin Port and Docks Board. He was an enthusiastic Freemason and took great interest in a variety of philanthropic and charitable undertakings. His writings include a number of valuable contributions to Dublin medical journals.

ALBERT EDWARD BOULTON, M.R.C.S. ENG., L.S.A.

ONE of the now fast disappearing race of "sporting doctors" has passed away in the person of Mr. A. E. Boulton of Horncastle. Mr. Boulton was attending a coursing meeting at Bamber on Nov. 16th. The meeting was a private one and in the interval between two courses Mr. Boulton and some of his friends galloped some five furlongs. Upon pulling up Mr. Boulton suddenly fell from his horse and when picked up he was found to be dead. He had for some time suffered from heart disease. Mr. Boulton, who received his medical education at King's College Hospital, was very well known and highly respected in Horncastle and its vicinity. The funeral took place on Nov. 25th in the presence of a very large number of friends and sympathisers.

GEORGE ROBERT CUBITT, M.R.C.S. ENG., L.S.A.

MR. GEORGE ROBERT CUBITT, formerly in practice at Stroud and surgeon to the hospital there, has died at Maidenhead at the age of 73 years. He studied medicine at King's College and became qualified as M.R.C.S. Eng. and L.S.A. in 1848. He was subsequently surgeon on the British Medical Staff of Omar Pasha's army and the Turkish contingent.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Albert Györy de Nádudvar, *primararzt* in Vienna.—Dr. V. Popoff, formerly Teacher of Operative Surgery in the Military Medical Academy, St. Petersburg.—Dr. A. Bruieff, formerly Professor of Dermatology and Syphilography in the University of Kharkoff.

MEDICAL REFORM AT ROCHESTER. — The Rochester District Society of the Corporate and Medical Reform Association, Limited, held its annual meeting at St. Bartholomew's Hospital, Rochester, on Dec. 8th, Dr. W. R. S. Jefferiss being in the chair. Mr. E. C. Warren of New Brompton was elected President, Mr. Ludford Cooper and Mr. Reeves were appointed honorary secretaries, and other members of the committee were re-elected. It was decided that a meeting should be held at least once a quarter and that the society should take up the work and position of a local scientific and ethical society. The Hull resolutions as published in THE LANCET and the *British Medical Journal* of Nov. 4th were considered in committee and afterwards unanimously adopted: (1) condemning the action of the General Medical Council in illegally sanctioning the certifying of unqualified men by registered practitioners, and calling on the President of the Council to retire from the London Obstetrical Society whilst it issues such certificates: (2) repudiating the recommendations of the General Medical Council to the Privy Council to register midwives for attendance on natural labour; (3) declaring on that and other grounds that the Council does not represent the profession and that it ought to be reconstituted and reformed; and (4) demanding specific reforms of the Medical Acts. A letter was read from the Gravesend local committee offering to unite with the Rochester society and to coöperate in a meeting of the profession for West Kent to protest against the registration of midwives and illegal certificates. This was agreed to and it was resolved that the President, Mr. Warren, Dr. C. Firth for Gravesend, and Dr. G. S. Shute for Northfleet, with power to invite other centres to unite, be a committee to organise such a meeting. A hearty vote of thanks was passed to Dr. Jefferiss for presiding.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WE here continue and conclude our report of the proceedings of the General Medical Council during its sixty-eighth session.

MONDAY, DEC. 4TH.

The Financial Position of the Irish Branch Council.

Sir CHRISTOPHER NIXON directed attention to the Council's resolution of Saturday in respect to the financial position of the Irish Branch Council. He objected to the matter being considered *in camerâ* because, as he said, it did not partake of the character of a penal case and there was nothing in any way discreditable in the Irish Branch Council being in pecuniary difficulty.

The PRESIDENT pointed out that the question was whether the Council could make public the legal opinion they had obtained in connexion with the matter.

Sir CHRISTOPHER NIXON reminded the Council that the matter was one that might ultimately come up in Parliament. He did not see how the Council could in the circumstances discuss it in private.

Mr. HORSLEY said that the legal opinion in question did not involve any persons. It was a matter of public import and he ventured to think that it must be discussed in public.

The PRESIDENT: I am entirely in the hands of the Council.

Dr. MACALISTER suggested that it should in the first instance be considered *in camerâ* and if it was found that there was nothing confidential in the opinion they might let the discussion go on in public. The opinion, he reminded the Council, had been circulated as a confidential document.

After Dr. BRUCE and Mr. BRUDENELL CARTER had expressed themselves favourable to the suggestion just made the Council, by a majority, agreed to go into *camerâ* for the purpose of giving the matter a "first consideration."

On the re-admission of the public some 30 minutes later

The PRESIDENT said: I have to intimate that the Council has come to the resolution that the whole question of the funds of the General Council and of the Branch Councils be referred to the Finance Committee, together with the trustees of the respective Branch Councils, with instructions to take legal advice if necessary and to report to the next session of the Council.

Applications for Restoration to the Register.

On the motion of Dr. MCVAIL, seconded by Dr. LOMBE ATTHILL, the Council adopted a proposal that such recommendations as the Executive Committee should think fit to make to the Council in reference to applications for restoration to the Medical Register should be made to the Council *in camerâ*.

Fraudulent Personation of Medical Graduates.

On the motion of Mr. HORSLEY, seconded by Dr. BRUCE, a long report by the committee on the prevention of personation was received and entered on the minutes. This report contained the following statement in regard to the committee's appointment and their interpretation of the reference to them:—

The question of securing the best means of preventing fraudulent personation was referred to a committee as follows: "That a Special Committee be appointed to report during the present session on the best means to secure the identification of a person applying to be admitted to the Medical or Dental Registers, and to prevent fraudulent registration either on first being admitted to the Register or on re-registration. That the whole subject of granting certificates of registration be also referred to the same committee for consideration and report." It having come to the knowledge of the Council that it was possible for unscrupulous persons to personate by fraudulent representations either living or dead registered practitioners, and to thereby gain possession of official entry of their false qualifications on the Medical Register, the Council instructed the above-named committee to report upon the general subject of fraudulent personation and on the best means of securing the identification of registered practitioners. The subject of fraudulent personation and the cognate subject of accuracy of the Medical Register have engaged the attention of the Council and Branch Councils on several occasions, but as by the efflux of time the precautionary means adopted at the commencement of the Medical Register appear to be now insufficient the committee regarded it necessary to consider (1) the circumstances under which a medical or dental practitioner gains entry of his name on the Medical or Dental Register;

(2) the conditions under which his registration is correctly maintained; (3) the principle of certification of registration; and (4) the prevention of inaccuracies in the Register.

The details of the whole subject appear to conveniently fall under the following heads:—

I. *Possible Channels of Fraudulent Personation.*
(1) Original entry of the name of a practitioner on the Medical or Dental Registers.
(2) Restoration of the name of a practitioner to the Medical or Dental Registers.
(3) Certification of registration.

II. *Preservation of the Accuracy of the Register.*

The chief recommendations of the committee were:—

That in all cases where application is made for registration on the Students' Register or Medical or Dental Registers under exceptional circumstances the facts of the case shall be furnished in the form of a statutory declaration.

With the view to identification of applicants for registration all forms of application shall be filled up in the handwriting of the applicant, and in all cases for restoration to the Registers the applicant shall furnish in addition a statutory declaration of the facts of his case as well as a certificate of identity.

That all forms of applications, duly signed and presented, shall be bound, indexed, and preserved for purposes of comparison.

That every applicant for registration as a medical or dental student or practitioner shall furnish an application in either Form 1, 2, and 3 of the forms appended to the report.

That the Forms 1 to 8, appended to the report, be approved by the Council for the use of the Registrars in the manner indicated in this report.

That the Registrars-General should be approached by the General Council in order that the Registrars of Deaths may be brought to comply with Section 45 of the Medical Act (1858) and Section 36 of the Dentists Act (1878).

That the School of Physic, Trinity College, Dublin, be invited to adopt the form of application for the registration of students accepted by all other teaching centres.

That a complete set of regulations governing registration under the Medical and Dentists Acts be formulated by the General Council.

The PRESIDENT: This is your final report.

Mr. HORSLEY: Yes, sir.

The motion to receive and enter the report on the minutes was agreed to.

Mr. HORSLEY then moved the adoption of the report.

Dr. MACALISTER proposed that the Council should go into committee on the report.

Dr. PETTIGREW seconded.

Dr. MCVAIL did not think it was possible to do justice to this report at the fag end of the session, seeing there was so much still to do, and he moved as an amendment that the consideration of the report be postponed till next session (the May session).

Dr. MACALISTER, after some conversation, mentioned that if the Council went into committee on the report now he should have to bring forward a considerable number of amendments—perhaps 14 in all. The discussion of these would, he believed, take at least a day, if not more.

Mr. HORSLEY pointed out that the present report was very much the same as that which had been submitted to the Council at the end of last session. Still, they were told that the Council could not now go on with the matter for another six months. However, if the enlarged time was asked for seriously he was quite willing to withdraw his motion in favour of Dr. McVail's amendment.

The motion for the adoption of the report was then by leave withdrawn.

Dr. BRUCE thought the Council should all appreciate the great trouble taken by Mr. Horsley in connexion with this question. At the same time, anything that affected the Standing Orders could not be too carefully considered, and he thought the proposed postponement for another six months would not result in any harm.

On a division the proposal for adjournment of consideration till May next was agreed to.

The Preliminary Examination—the Minimum Requirements.

On the motion of Sir JOHN BATTY TUKE, Chairman of the Education Committee, seconded by Mr. BRUDENELL CARTER, the Council received and entered upon the minutes the following report by the Education Committee on the question of raising the minimum requirements of the Council as regards preliminary examinations.

The committee presented in June, 1899, an *interim* report giving the opinions of a large number of educational authorities on the question referred to them; and asking (1) that the period within which the committee had to report might be extended, and (2) that a sum of £100 should be placed at their disposal for the purpose of enabling them to obtain expert assistance. Both of these requests were granted by the Council on June 5th, 1899.

The committee accordingly sought and secured the assistance of the Rev. T. W. Sharpe, C.B., formerly H.M. Senior Inspector of Schools; Professor W. S. M'Cormick, LL.D., of the University of St. Andrews; and Mr. Joseph McGrath, LL.D., one of the secretaries of the Royal University of Ireland, as experts conversant with the condition of secondary education in their respective divisions of the kingdom.

To these gentlemen were communicated the regulations and papers of questions of the several examinations recognised by the Council and the examining bodies were requested to permit them to inspect specimens of the answers sent up by candidates. A large proportion of the bodies were able to comply with this request and in addition they furnished for the use of the experts a number of details of a confidential character as to their methods of marking, classification, &c.

Each of the expert advisers dealt first with the examinations of his division of the kingdom and then entered into communication and conferred with his colleagues, the various documents placed at their disposal being interchanged between them. Ultimately all three met in London for the purpose of comparing their results and of drawing up a joint report. This latter was presented at a meeting of the committee on the first day of the present session, when the members of the committee had an opportunity of discussing it and the individual reports on which it was based with the experts in question. The committee desire to record their great obligations to these gentlemen for the detailed and thorough investigations which they have made and for the highly instructive comments which they have submitted on the examinations generally and individually.

As regards the point on which the committee was requested to form and to give a definite opinion the unanimous report of the experts is as follows:—

"We have considered the question whether the Senior and Higher grade examinations should be substituted for Junior. Taking into account the present state of secondary education in the country, we see no possibility of enforcing such a requirement in the near future. A demand of this kind would certainly result in defeating the end which the General Medical Council have in view. Either it would diminish to an indefinitely large extent the number of candidates entering the profession, or it would compel the Examiners to a laxity of marking and a depreciation of the standard of questioning which would merely have the effect of lowering the senior papers to the level of the junior papers. The standard of the medical preliminary examination must depend upon the general standard of the secondary education of each country in which the examination is held and a standard too high for one might be found too low for another. We think, however, that the immediate object of the General Medical Council would be gained by the gradual raising of the standard of the lower 'junior' examinations to the level of those 'junior' examinations which, in our opinion, rank highest."

This joint conclusion was strongly enforced by arguments adduced by the experts severally.

The committee feel assured that the Council will attach great weight to the mature opinions thus laid before them by men of wide experience in matters relating to secondary education and examination. These opinions are in consonance with those which the committee have already expressed in their reports to the Council, and in particular in the report of November, 1898.

The committee are therefore constrained to maintain their view that a number of the junior examinations must still for a considerable time continue to be recognised for the purpose of medical and dental registration of students.

They propose, however, to give effect to the specific recommendations of the experts in regard to certain of these examinations, of which it is desirable that the scope and standard should be still further improved, by entering into communication with the bodies which conduct them.

Applications have been received for the recognition of certain new examinations for the purposes of students' registration. The committee desire, before making recommendations as to these applications, to have the opportunity of conferring with their advisers on the character and standard of the proposed examinations.

For these purposes, and in order that their investigations may be rendered more complete, the committee desire to be authorised to retain the services of the gentlemen who have already given them such important assistance, and they therefore ask that a further sum of £100 be placed at their disposal for the year 1900.

Sir J. BATTY TUKE moved the adoption of the report. He said it was the latest by the Education Committee on the subject of preliminary examinations and he sincerely hoped it would be the last for years to come. Although it must be a disappointment to a number of gentlemen around the Council table he could not help pressing upon them the need of accepting the decision formulated in the report as final.

Dr. GLOVER: For the present.

Sir J. BATTY TUKE: Not for eternity. Experts had submitted to the committee their opinions, but these must be held to be confidential documents.

Dr. MACALISTER seconded the motion. He pointed out that the experts had been selected by the members of the Education Committee—the representative for England by the English members, that for Scotland by the Scotch members, and that for Ireland by the Irish members of the committee. He thought all the Members of Council would agree that the experience of these gentlemen was established on a broad basis and that they were all singularly conversant with matters relating to secondary education. They had given reports in regard to the junior examinations which could be utilised next year. They had further given reasons for differentiating between the junior and senior examinations. They had shown that defects did not arise so much from systems of marking as from the kind of education—the kind of education which must go on from the beginning of a student's period of study. It seemed to him likely that if they could not get the senior examinations they would get on the lines of the

present junior examinations progressive improvement which would bring these junior examinations to any point of superiority which might be considered advisable, and the authorities were willing to aid in bringing that about.

Sir RICHARD THORNE said that he wished to move an amendment. The real point he had risen to speak upon was that the Council were now asked to wait another six months in connexion with the question of these examinations without having before them the proper materials on which they might form a judgment. He proposed as a rider to the motion that in the meantime the joint report of the three experts and the individual reports of the experts should be circulated among the members of the Council. He said that the Council were told in this report by the Education Committee that there had been a joint report and also individual reports. They were told that these individual reports contained the most highly instructive comments and that on the basis of these reports the three experts had not only settled the question in regard to the senior examination, but had gone a great deal further. They had come to the conclusion that they saw no possibility of enforcing the substitution of the senior and higher grade examination for the junior, and these three experts were going round the country saying that they were from the General Medical Council and desired to inform the educational authorities as to the method in which the standard of education might be raised. He did not see how this should be permitted. The question which had been referred to the committee was whether the Council should demand the senior examination rather than the junior. In their last session they had received from the Education Committee a report (of 54 pages) which had not been discussed by the Council, and now he wanted to know upon what the report of these individual experts was grounded. The conclusion come to was one which he hoped the Council would not for one moment accept. This joint report and the report of the three experts ought to be in the hands of the Council before they spent another £100 in payment of assistance.

The PRESIDENT: We have got the joint report in the print before the Council.

Sir RICHARD THORNE: It is but a little bit out of the report.

Dr. MACALISTER: It is the only bit on the point referred to us.

Sir RICHARD THORNE: It is a pity the experts went out of their way to deal with other subjects. I think we ought to have the whole reports of the individual experts. To accept their conclusion would be to take an enormous leap in the dark.

Dr. REID seconded the amendment.

Dr. MACALISTER said that if the individual reports were circulated the Council would be almost sure to get into trouble, because the reports were of a confidential character.

Sir RICHARD THORNE: I do not want the confidential parts to be circulated.

Dr. MACALISTER: In that case the value of the reports will be lost.

Dr. REID: The reports need not be circulated. They might be seen in the office.

Dr. LEECH said that the experts had adopted a tone which was so hopeless that the Council could not accept it without knowing more of the matter. It was said that the raising of the standard would diminish the number of candidates for the medical profession. He thought they ought to know a little more than that because the deliverance was very definite. They should know a little about the experts' opinions on the general education of the country and whether there was such a separation in this country between junior and senior examinations as would prevent the General Medical Council from adopting the senior examination for the medical preliminary examination.

Dr. PYE-SMITH said that he spoke from some experience—and he was sure that he would be supported by those who had seen much of examinations—when he said that the standard of examinations was lamentably and disgracefully low. He therefore did not think the Council should accept this report as a final report. Before concluding he as a new member wished to enter a protest against what he considered had been the prodigal waste of time during the early days of the present session.

Mr. HORSLEY said that if there was one question upon which he and the other Direct Representatives had been sent to the Council it was this question, it being understood that by all manner of means in their power they were to endeavour to raise the standard of examinations. They could not accept this report. It was not only a disappointment to read it, but it would be very expensive to carry on the work proposed.

On the motion of Dr. MCVAIL the debate was adjourned.

The Council adjourned.

TUESDAY, DEC. 5TH.

THE Council met again to-day, Sir WILLIAM TURNER presiding, and brought to an end the work of the session.

The Preliminary Examination: The Minimum Requirements.

Discussion was resumed on the motion for the adoption of the recommendations of the Education Committee on this subject, and the amendment moved at the previous sitting by Sir RICHARD THORNE.

Sir RICHARD THORNE said he wished to alter his amendment to the following form, viz.:—

That the Education Committee be requested to obtain from the experts a report setting out in full their reasons for the conclusion they have arrived at with regard to the adoption by the Council of the Senior and Higher Grade Standard of Preliminary Education and that the sum of £100 be placed at the disposal of the committee for that purpose.

He was anxious, he said, to learn how the experts had arrived at the conclusion that the thing which this Council desired was impracticable and impossible, at any rate in the near future. He believed if the thing which the Council desired had been secured that it would have done more than anything else to raise the standard of their profession and put an end to that miserable state of things in which men in the recesses of their large towns were competing for 6*d*. fees and fighting one against the other for clubs and things of that kind. He must confess that he had read the report of the committee with the very greatest disappointment.

Dr. PETTIGREW seconded the amendment.

Sir RICHARD THORNE said he would wish to add to his amendment some words of thanks to the Education Committee for their important and arduous labours in connexion with this matter.

The PRESIDENT: I don't think it is necessary. The chairman of the committee is here and he does not mind about the jam; he will take his powder without it.

Sir JOHN BATTY TUKE said he was quite prepared to accept the amendment and the committee would undertake to obtain the information desired in the shortest possible time.

Dr. MACALISTER said that while it was quite possible to get the fullest reasons from the experts, the Education Committee as a whole had nothing to do but fall back upon its report, which had been adopted by the Council.

Dr. MCVAIL expressed the view that if this Council stated a minimum requirement and adhered to it the schools would respond in a proper manner and in this way they would get the right sort of education. The result would be that they would secure a better class of students and, he believed, would get rid of many of the difficulties in connexion with the practice of the profession which were the source of so much trouble to the Council.

Dr. GLOVER took exception to the £100 being restricted in the manner proposed to the mere justification of the report. He shared with Sir Richard Thorne the disappointment that they were not able to proceed so rapidly as they wished in this matter, but he was strongly of opinion that they had acted wisely in calling in the aid of the experts.

Sir WILLIAM THOMSON, seconded by Mr. TEALE, moved to leave out the words "for that purpose."

Sir RICHARD THORNE resisted their omission, but on a vote being taken he was defeated by a large majority.

The amendment with the words omitted was then put to the Council and adopted as a substantive motion.

The Apothecaries' Hall of Dublin.

Sir DYCE DUCKWORTH brought up a report from the Examination Committee on the examinations held by the Apothecaries' Hall of Dublin in July.

The committee, after dealing with the reports by the inspector (Dr. G. A. Gibson) and the assistant examiners in surgery (Mr. Alexis Thomson and Mr. H. G. Howse), said:—

The Examination Committee is pleased to lay before the General Medical Council so satisfactory a report of these examinations and to find that as a result of its previous reports and the regular inspection of this Board a standard has been reached which cannot fail to be beneficial both to the public and the profession. They recommend the General Medical Council to suggest to the Board the necessity of

furnishing the Council with the means of tracing the particular arts examinations which their imperfectly educated candidates have passed.

Mr. TICHBORNE complained of the tone of some of the observations of the committee and the grudging praise bestowed upon the examinations and suggested that certain words should be deleted. He also took the opportunity of asking Dr. Atthill to withdraw the expressions he made use of last week when the proposal was discussed for the institution of a conjoint qualifying examining board in Ireland, to include the Royal Colleges and the Apothecaries' Hall. According to the report in THE LANCET Dr. Atthill said that the Apothecaries' Hall "was not a body that anybody who had respect for its character would join." This, he (Mr. Tichborne) said, was a libel upon 500 or 600 citizens, and he had received a letter from the secretary of the Hall saying that a special meeting had been called for the purpose of considering the very extraordinary situation.

Dr. ATTHILL said he always regretted to say anything which was calculated to give personal offence, but the statement he made on that occasion he felt bound to maintain. Had he not been stopped by the President he should have read a paper which he considered justified the statement. He quite admitted that for some time the examination of the Hall had been a proper one.

The report was adopted with certain words to which Mr. Tichborne took exception deleted.

New Standing Order.

Mr. TOMES presented a report from the Executive Committee with a proposed new standing order for regulating procedure in dental penal cases and the Council adopted it.

The Pharmacopœia.

Dr. LEECH submitted the following report from the Pharmacopœia Committee, viz.:—

The Pharmacopœia Committee beg leave to report to the Council as follows:—

Up to the present date 28,500 copies of the British Pharmacopœia of 1898 have been printed, and of these 27,613 copies have been disposed of; it is therefore evident that a further issue of 3000 copies should be authorised. The committee note with satisfaction that the expenses incurred in the preparation of the Pharmacopœia have been more than met.

A meeting has been held of the Conference between the members of the sub-committee and the representatives of the pharmaceutical societies and on its recommendation a number of debatable points have been referred to experts for further investigation and report.

With the view to the more speedy production of the Indian and colonial addendum the committee have deemed it advisable to discontinue for the present the preparation of the annual reports on the Progress of Pharmacy.

A detailed report on the Indian and colonial addendum has been presented to the editor and is hereto annexed. 53 of the 70 British administrations of India and the colonies have already communicated their views to the Medical Council. The committee desire to express their cordial thanks to those who have thus contributed much valuable assistance and to note with gratification that in many colonies the British Pharmacopœia in its present form has completely satisfied all requirements.

Dr. LEECH explained that the funds in hand amounted to £1193. They were constantly getting in answers from the Indian and colonial authorities and they hoped before very long to be able to submit a draft addendum to the Council for consideration. They had just received a very important draft report from Canada. The Canadian pharmacologists and pharmacists who were taking a great interest in the matter had joined in drawing up a draft report which furnished valuable information as to what was required in Canada.

The report was adopted and the issue of 3000 more copies was authorised by the Council.

The Penal Cases Committee.

The Council sat *in camerâ* for a time considering a report from the Penal Cases Committee.

Public Health Diploma.

On the motion of Sir RICHARD THORNE, seconded by Dr. MCVAIL, the following recommendations by the Public Health Committee were received and entered on the minutes:—

1. That Rule I. (1) requiring that "a period of not less than 12 months shall elapse between the attainment of a registrable qualification in medicine, surgery, and midwifery and the admission of the candidate to any examination, or any part thereof, for a diploma in sanitary science, public health, or State medicine" be maintained.

2. That Rule I. (2) be so far modified as not necessarily to require evidence as to attendance on a course of practical laboratory instruction in the case of candidates already competent in the branches of study in question, and that it read as follows: "(2) Every candidate shall, after obtaining a registrable qualification, either have produced evidence that he has attended a sufficient course of practical instruction in a laboratory or laboratories, British or foriego, approved by the body granting the diploma, in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught; or shall otherwise have produced evidence that he has received adequate instruction in the branches of study referred to."

3. That the first paragraph of Rule I. (3) be modified so as to read as follows: "Every candidate shall have produced evidence that, after obtaining a registrable qualification, he has practically studied the duties of outdoor sanitary work under a medical officer of health."

4. In view of the increased latitude thus advocated as regards the teaching to be required under Rule I (2) and (3), your committee have arrived at the further conclusion that the bodies granting Diplomas in Public Health should always engage the services of (*a*) examiners competent in the sciences of bacteriology, chemistry, &c., in relation to public health; and (*b*) examiners who have themselves had practical experience in the outdoor work of a medical officer of health.

5. It having come to the knowledge of the committee that there would be advantage in making some extension in the number of the medical officers of health entitled to certify as to compliance with the terms of Rule I. (3), your committee are of opinion that there would be advantage in adding to the officers defined under (*a*), (*b*), and (*c*) the following: "(*d*) Under a medical officer of health who devotes his whole time to public health and allied duties, and is not engaged in private practice."

Having regard to the above conclusions your committee do not deem it necessary to advert to the answers which they have received to the question in their circular letter of Oct. 19th, 1899, as to what is a reasonable fee for a medical officer of health who undertakes to give a six months' course of tuition in outdoor sanitary work.

Sir RICHARD THORNE wished to add at the end of the printed report as circulated among the members of Council the following paragraph:—

With the consent of the President Mr. Muir Mackenzie's opinion was asked as to whether certain colonial and Indian medical qualifications were included in the phrase "a registrable qualification" in Rule I. (1) of the rules of the Council and his answer was as follows:—

"Every degree or diploma which qualifies for admission to the Medical Register, whether in the Home, the Colonial, or the Foreign list, is a registrable qualification for the purposes of the Medical Act."

Having regard to this opinion your committee have not deemed it necessary to propose any modification of Rule I. (1) referred to.

In answer to the PRESIDENT

Sir RICHARD THORNE said that as the Council were willing to postpone consideration of the report till next session and as the committee had thus got six months more in which to deliberate it would be as well if they were authorised to ask the licensing bodies for observations on the recommendations. He moved to this effect.

Dr. MCVAIL seconded.

The Council thereupon agreed that the report should be sent down to the bodies interested with the request that they should make comments on the several proposals of the committee.

Students' Registration Committee.

On the motion of Sir DYCE DUCKWORTH the Council adopted the report on exceptional cases presented by the Students' Registration Committee.

Unqualified Dispensers.

It was agreed, on the motion of Mr. TEALE, seconded by Mr. BROWN, that the following report of the Unqualified Dispensers' Committee should be received and entered on the minutes:—

This committee was appointed by resolution, May 31st, 1899, "to consider the communications on unqualified dispensers forwarded by the Privy Council."

The following is the committee's report.

The question of the employment of unqualified dispensers is a somewhat complicated one. In the first place there is the legal aspect. Two bodies possess a certain amount of authority in the examination and certification of dispensers, the Society of Apothecaries and the Pharmaceutical Society.

By their Act (1815) the Apothecaries have authority to examine and certify "assistants to apothecaries" and to prosecute "any person who in England or Wales shall act as assistant to any apothecary to compound and dispense medicines without having obtained such certificates." This power of prosecution would seem to be limited to persons employed by "apothecaries" and is practically unused, no complaint having been made to the Society on the question.

The Pharmaceutical Society gives a qualification without which it is unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons, or assume the title of chemist and druggist; but it appears to be not illegal for an unqualified assistant to dispense medicines containing poisons provided the chemist is on the premises.

In the second place there is the practical aspect of the question.

Setting aside the minor dispensing, which medical men carry out themselves without outside help, there is the dispensing on a larger scale (and on old-fashioned lines), which exists chiefly in the practice of the older members of the profession and in outlying districts. This is carried on sometimes by unqualified dispensers who have been trained in the work for years and have become, from long experience, expert and safe; sometimes by dispensers who have obtained certificates either from the Society of Apothecaries or the Pharmaceutical Society. On this point may be quoted the statement by Mr. Upton, solicitor to the Society of Apothecaries, that "during the last two years there have been 320 candidates, 171 of whom succeeded in obtaining the certificates (64 males and 107 females)."

The committee, having carefully considered the whole matter, believe that the transition from the small amount of dispensing which a medical man can without difficulty perform himself to the larger amount requiring the services of a special dispenser is so gradual that it would be impossible to draw a line and say at what point a qualified person becomes indispensable.

Under these circumstances the committee do not see their way to recommend any course to be taken by the Council at the present time in reference to this question, but they endorse the reply sent by the Executive Committee to the Privy Council:—

"That, whilst they fear occasional accidents may arise from the employment by qualified medical practitioners of careless or incompetent dispensers, the cases, in their opinion, are very rare, and it appears to the committee that probably the best protection is afforded to the public by the responsibility of the practitioner for the acts or defaults of the servants whom he employs."

In reply to Mr. BROWN, the PRESIDENT said that the report would certainly be sent to the Privy Council.

Companies' Act Amendment Bill.

On the motion of Mr. TOMES, seconded by Mr. HORSLEY, the Council agreed to receive the following interim report from the Committee on the Companies' Act Amendment Bill:—

Your committee is glad to be able to report that the Lord Chancellor's clause prohibiting the practice by companies of the business or profession of physician, surgeon, dentist, or midwife, which has now been placed in a Government measure (the Companies' Acts Amendment Bill), was passed without amendment by the House of Lords towards the end of the last session. It was too near to the close of the session for the Bill to be then introduced in the House of Commons, but it is understood that the Government intend to actively proceed with the measure, and it is hoped that it will be introduced in the House of Commons early in the ensuing session.

In view of the doubt which still attaches to the application of the words "physician" and "surgeon" your committee feel that the addition of the words "medical practitioner" is more than ever necessary and they are using their best endeavours to procure its insertion, which will probably present no difficulty.

Since its last report your committee has received further information which enables it to state that both medical and dental companies are still actively pursuing highly objectionable forms of practice.

The following is the clause referred to:—

It shall be unlawful for a company, under the Companies' Acts, 1862 to 1898, to carry on the profession or business of a physician, surgeon, dentist or midwife, and if any company contravenes the enactment it shall be liable, on summary conviction, to a fine not exceeding £5 for every day during which the contravention happens.

Medical Aid Associations.

Dr. GLOVER, as chairman of the Committee on Medical Aid Associations, submitted the following report:—

The committtee continue to receive communications from various persons interested in this subject, and to give help to the consideration by them of the suggestion of the Council at its May meeting in favour of the formation of a conciliation board. The committee may remind the Council of the terms of the two resolutions on the subject of medical aids which the Council passed in May last:—

Resolution 1.—"That the Council approve of the recommendation of the committee in favour of a board of conciliation to consist of representatives of the friendly societies and of the medical profession, provided it is understood that, having regard to the statutory responsibilities of the Council, it is inexpedient that it should take part officially in the formation of a board." (Minutes, June 5th, 1899, p. 62.)

Resolution 2.—"That the Council strongly disapprove of medical practitioners associating themselves with medical aid associations which systematically practise canvassing and advertising for the purpose of procuring patients." (Minutes, June 6th, 1899.)

In reference to the latter resolution of the Council your committee have reason to believe that it is having its intended effect in diminishing the system of canvassing and advertising for the purpose of procuring patients. The following letter bearing on this resolution has been received by the chairman:—

"London and Manchester Industrial Assurance Company, Limited,
"Chief Office,
"Southwark Exchange,
"J. G. GLOVER, Esq., M.D., "London: September 7, 1899.
"Chairman of the Medical Aid Committee,
"General Medical Council,
"299, Oxford-street, W.

"Dear Sir,—For the information of your committee we desire to make you acquainted with the fact that we have ceased to take new members into our medical aid department. Therefore, what is objected to by the General Medical Council's resolution of May last cannot now possibly occur so far as this company is concerned. At the same time we would point out that we never permitted objectionable methods in the enrolment of members for the securing to them of medical attendance and that our Medical Aid Department has not been carried on as a source of profit to the company. "Yours truly,
"(Signed) W. DAWES,
"Managing Director.

The chairman of the committee is informed by Mr. Dawes, managing director, that there are about 1000 medical gentlemen who are under agreements with this company.

The question of the formation of a board of conciliation is receiving the consideration of a committee of the British Medical Association and other bodies pending the results of which this committee can only report that the information received by them continues to be on the whole favourable to such a scheme, though differences of opinion in the profession exist. In a conference on Nov. 30th, 1899, between your committee and that representing the friendly societies the questions on which most difference of opinion exists were freely and candidly discussed and your committee received important information on such questions which confirms them strongly in the belief that such a board would tend powerfully towards the advantage of the profession and the improvement of medical attendance on the members of such societies.

In submitting this report Dr. GLOVER said that if he had had more time he should have shown that both the resolutions embodied in the report were having good effect. The friendly societies had taken some time to make up their mind, but that time having been granted them they had done well, and he hoped that during the next session of the Council he would be able to report the effect of the Conciliation Board's labours. He had had a communication within the last few days in which was indicated a wish that the conflict between the friendly societies and the General Medical Council should cease.

Mr. TEALE seconded Dr. Glover's motion that the report be received and entered on the minutes, and that it be adopted.

Dr. MACALISTER said that there was nothing in the report to adopt.

Mr. CARTER: Well, let us say that we approve of it.

Dr. MACALISTER: It is a mere history.

The PRESIDENT: It is sufficient to get it on the minutes.

The report was then received and entered on the minutes and the committee was continued.

Infamous Conduct.

Sir CHRISTOPHER NIXON moved:—

That in all cases where a practitioner's name has been removed from the Medical Register for conduct infamous in a professional respect such practitioner should be informed that the legal right to practise medicine, surgery, and midwifery is forfeited for such period as the practitioner's name does not appear on the Register."

Dr. MACALISTER said that if the Council accepted this motion it would conflict with the "amended clauses" they were asking the Privy Council to accept.

Mr. BRUDENELL CARTER doubted whether the motion was an exact statement of the case.

After some discussion the motion, on the appeal of Dr. MCVAIL, supported by Dr. BRUCE, was withdrawn.

Foreign Practitioners and the British Medical Curriculum.

Mr. HORSLEY moved:—

That the Education Committee be requested to consider the circumstances under which at present foreigners obtain exemption from some of the conditions of education and study required by certain of the qualifying medical corporations under the curriculum determined by the General Medical Council.

He said that the report which the Education Committee had presented to the Council this session concerned exemptions which were the object of discussion at the conference. The report was of the very greatest value, but it showed evidence of inequalities which he was very anxious the Education Committee should inquire into. These inequalities were inequalities between foreign and British students, and he believed they gave advantage to the foreign student so far as he was connected with the five years' curriculum. The report distinctly showed that the University of Oxford, the Victoria University, and the Royal University of Ireland made no distinction as between foreigners and our own countrymen. But the vast majority of the qualifying bodies did make exceptions and they accepted diplomas of an inferior description which practically did not in the least confer upon the recipients the right to practise. What the corporate bodies ought to insist upon in the matter of foreign candidates for registration in this country was a certificate of a State examination in each country. This report also showed that in regard to the foreign places of instruction many of the foreign bodies accept from the schools certificates that the candidates had gone through a certain curriculum of instruction. He personally had an extensive knowledge of foreign medical schools and he knew as a matter of fact that the course of instruction in these foreign schools was not strictly parallel with that in our own schools. He thought the Council should be assured that a foreigner should have a certificate to practise in the country to which he belonged before he was admitted to the final British examination. That should be the basis they should adopt.

Mr. TOMES seconded the motion.

Dr. MACALISTER could not see what could result from the remittance of this motion to the Education Committee. The Council had already expressed an opinion on the question and he did not see that they could get anything more.

Sir J. BATTY TUKE, the chairman of the Education Committee, strongly objected to the proposal. He said he did not understand how the committee were to obtain information from the different universities in all parts of the continent of Europe, and if they attempted to get that information it would be a very expensive matter.

After some further discussion the motion was carried by 10 votes to eight.

Sir J. BATTY TUKE again told the Council that it would entail very considerable expense to carry this resolution into effect because the committee would have to put themselves into communication with every university in Europe.

The PRESIDENT: Report to the effect that you cannot carry this out without funds.

Belated Registrations.

On the recommendation of the English Branch Council it was resolved to enter upon the Medical Register the names of Mr. Thomas Miles Beale, M.R.C.S. Eng., 1885, and Mr. Thomas Henry Lovegrove, M.R.C.S. Eng., 1867.

Practitioners in Rhodesia.

In connexion with a communication in regard to a medical ordinance for the practice and sale of medicine and practice of dentistry in Southern Rhodesia, remitted to the General Medical Council by the Executive Committee, it was proposed by Mr. BRUDENELL CARTER, seconded by Dr. GLOVER, and agreed to, that in the opinion of the Council the objections urged in the memorial drawn up by medical practitioners in Matabeleland (Southern Rhodesia) against the medical ordinance under which they have to act are valid and important and indicate a serious grievance of which they are justified in complaining, and that this resolution should be forwarded to the Colonial Secretary (Mr. Chamberlain) with request that he will take the matter into his consideration.

A Colonial Entrant.

Sir J. BATTY TUKE informed the Council that the University of Adelaide had applied to the Medical Council to have its first examination in arts placed on the list of examinations qualifying for admission to the Medical and Dentists' Registers. He moved that the application be granted.

This was agreed to.

End of Session.

There being no other business on the paper

Dr. BRUCE said he was sure that all the members of Council owed a deep debt of gratitude to Sir William Turner for the manner in which he had presided during the session.

After applause from the members present

The PRESIDENT said: I am very much obliged to you.

The Council then adjourned till May next.

Medical News.

UNIVERSITY OF LONDON.—At the M.B. examination for honours held in October the following candidates were successful:—

Medicine.—First-class: Russell John Howard (gold medal), London Hospital. Second-class: James Beatty, Trinity College, Dublin; Caleb Thomas Hilton, Guy's Hospital; Charles Grant Pugh, B.Sc., Middlesex Hospital; Sydney Richard Scott, St. Bartholomew's Hospital; Frederick George Thomson, University of Cambridge and Middlesex Hospital; and Harold John Van Praagh, St. Mary's Hospital. Third-class: Walter Clapham Hirst, St. Bartholomew's Hospital; and Mabel Geraldine Stevenson, Royal Free Hospital and London School of Medicine.

Obstetric Medicine.—First-class: William Billington (gold medal), Mason University College and Queen's Hospital, Birmingham; Mary Muriel Griffin Iles, Royal Free Hospital; Frederick George Thomson, University of Cambridge and Middlesex Hospital; and William Howard Unwin (scholarship and gold medal), Charing Cross Hospital. Second-class: Arthur Stanley Barnes, B.Sc., Mason College and Queen's and General Hospitals, Birmingham; John Austin O'Dowd, Birmingham Medical School; Sydney Richard Scott, St. Bartholomew's Hospital; and Mabel Geraldine Stevenson, Royal Free Hospital and London School of Medicine.

Forensic Medicine.—First-class: Russell John Howard (gold medal) London Hospital. Second-class: Arthur Stanley Barnes, Mason College and Queen's and General Hospitals, Birmingham; Harold Hartley, Owens College and Manchester Royal Infirmary; Sydney Richard Scott, St. Bartholomew's Hospital; and Robert Gordon Strange, St. Thomas's Hospital. Third-class: Caleb Thomas Hilton and George Norman Meachen, Guy's Hospital; Mabel Geraldine Stevenson, Royal Free Hospital and London School of Medicine; Philip Turner, B.Sc., Guy's Hospital; and Ethel Miller Vernon, London School of Medicine and Royal Free Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only and is not final until the reports of the examiners shall have been confirmed by the Senate.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board at the October Quarterly Meeting of the Examiners in the subjects indicated:—

Chemistry and Physics.—Ernest Francis Rimington Alford, University College, London; Edward Guy Anthoniez, St. Mary's Hospital; John Aylen, St. George's Hospital; Thomas Graham Campbell, St. Mungo's College, Glasgow; Richard Charles Bright, University College, Bristol; Joachim Martin Carroll, Royal College of Surgeons, Edinburgh; James Clarke-Hall, St. George's Hospital; Charles Arthur F. Cresswell and Arthur Humphrey Curtis, University College, London; Victor Adolphus Crinks, Clifton Laboratory; Leslie Doudney, Guy's Hospital; Keith Edgar, St. Olave's Grammar School; Frederick George Goble, Guy's Hospital; Charles Aubrey Godson, St. George's Hospital; Morris Grundy, University College, London; Frederick Fuller Hatton, University College, Bristol; William F. Hague Ives, Hartley Institute, Southampton; Arthur Hilderband Jacob, London Hospital; Robert Jones, L.S.A. Lond., Royal College of Surgeons, Edinburgh; Edward Leslie King, University College, London; Charles Harry Morris and John Findon Murphy, London Hospital; Russell Edwards Palmer and Wilfred Hill Powell, St. Mary's Hospital; Carl Henry Reinhold, Guy's Hospital; Timothy William Sexton, Middlesex Hospital; Charles Speers, St. Mary's Hospital; and Ralph Moignard Wingent, Guy's Hospital.

Practical Pharmacy.—Charles F. M. Abbott-Brown, King's College, London; Lionel Danyers Bailey, St. George's Hospital; Joab E. Lionel Bates, Guy's Hospital; Herbert Ernest Batten and Stanley Leemoore Brimblecombe, St. Mary's Hospital; Isaac Wilfred Bent, Private Study; Harold Stanley Burnell-Jones, London Hospital and King's College, London; George Archibald Carter, Royal College of Surgeons, Edinburgh; Arthur Frederick Cole, St. Mary's Hospital; Frank Powell Cole, Calcutta Medical College; Robert Higham Cooper, Charing Cross Hospital; Gerald Coneybeare Cross and Meredith Broderick Dawson, Middlesex Hospital; Sydney James Evans, Guy's Hospital; Hamilton Stanley Faber, St. George's Hospital; Harry Arthur Fenton, St. Mary's Hospital; Sanderson Claude Foster, Westminster Hospital; John Vere Foster, Mason University College, Birmingham; Harry Gardner, Firth College, Sheffield; Alexander W. Harvey Grant, Charing Cross Hospital; Colin Sadler Hawes, St. Bartholomew's Hospital; Henry W. John Hawthorn, Mason University College, Birmingham; Alfred Stroud Hosford, University College, London; Thomas H. J. Ellis Hughes, St. Mary's Hospital; Thomas Hutchinson, Mason University College, Birmingham; Marchant Richard Johnson, London Hospital; Frederick J. Felix Jones, Guy's Hospital; Victor R. Fowell Kroenig, King's College, London; John Conrad Gie Kunhardt, St. Mary's Hospital; Frederic William Longhurst, St. George's Hospital; Ernest Hammond McMahon, Charing Cross Hospital; Robert Martin McQueen and William Martin, St. George's Hospital; John I. Papanicoly, London Hospital; Hugh Falkenberg Powell, University College, London; Thomas Rowland Roberts, St. George's Hospital; George Mervyn Seagrove, Hugh Hamilton Serpell, and Hugh Ellis Stanger-Leathes, St. Bartholomew's Hospital; Percy Nelson Smith and William Gordon Speers, St. Mary's Hospital; Andrew Morris Stevens, University College, London; Francis Talbot, Charing Cross Hospital; John Lionel Tayler, St. Thomas's Hospital; W. Benjamin Batchelor Taylor, London Hospital; Edward Mervyn Thomson, St. George's Hospital; Reginald Herman Tribe and James E. Turle, University College, London; Adriaan Francois Van Dijk, Royal College of Surgeons, Edinburgh; Thomas Hedley Vickers, St. Mary's Hospital; Edward Colston Williams, St. Bartholomew's Hospital; James Alexander Williams, University College, London; Murray R. Osmond Wilson, University College, Bristol; Charles W. Tuthill Woods, St. George's Hospital; and John Henry Wroughton, St. Bartholomew's Hospital.

Elementary Biology.—Frederick Charles J. Baker, King's College, London; Harold Stanley Burnell-Jones, London Hospital and King's College, London; Thomas Graham Campbell, St. Mungo's College, Glasgow; Leslie Doudney, Guy's Hospital; Herbert James Duské, St. Mary's Hospital; William Haywood Hamilton, Tonbridge School; Frederick Fuller Hatton, University College, Bristol; Archibald Gates Payne, Charing-cross Hospital.

Materia Medica.—Charles Herbert Gask, Guy's Hospital; Frederick Aylmer Hort, Middlesex Hospital; Robert Jones, L.S.A. Lond., Royal College of Surgeons, Edinburgh; and Thomas Morgan, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE. — The following medical degrees were conferred on Dec. 7th:—

Doctor of Medicine.—C. H. Cayley, Pembroke College.

Bachelor of Medicine and Bachelor of Surgery.—S. E. Dore and P. F. Barton, St. John's College; E. K. Le Fleming, Clare College; and H. F. Bassano, Trinity College.

Mr. Timothy Holmes of Pembroke has been elected to an honorary fellowship in his old college, together with Dr. Haig-Brown, Master of the Charterhouse, and Mr. W. Burnside, F.R.S.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. F. Blumenthal, Assistant in the First Medical Clinic, has been recognised as *privat-docent* of Internal Medicine.—*Budapest:* Dr. August Székely has been recognised as *privat-docent* of the Experimental Pathology and Therapeutics of Infectious Diseases.—*Bologna:* Dr. G. Berti has been recognised as *privat-docent* of Pædiatry.—*Brussels:* Dr. Spehl has been appointed Professor of General Pathology and Dr. Demoor Professor of General Physiology.—*Leyden:* Dr. Kan has been recognised as *privat-docent* of Laryngology and Otology.—*Munich:* Dr. Hans Schmaus has been appointed Extraordinary Professor of General Pathology and Pathological Anatomy; also Dr. Carl Kopp, Extraordinary Professor

of Dermatology.—*New York (Polyclinic and Hospital)*: Dr. Morris Manges has been appointed Professor of Medicine in succession to the late Dr. Page.—*Rome*: Dr. V. Montenovesi has been recognised as *privat-docent* of Operative Medicine.—*Strasburg*: Dr. A. Bethe has been recognised as *privat-docent* of Physiology; also Dr. O. von Fürth as *privat-docent* of Physiological Chemistry.

AT a recent meeting of the East Suburban Medical Protection and Medico-Ethical Society at the West Ham Hospital, E., the following resolution was passed: "That where ambulance lectures are advertised to be given by a medical man it is both inadvisable and unprofessional for the name, address, or qualifications of the lecturer to appear in the advertisement."

THE SOUTHPORT INFIRMARY AND THE CREWE HOSPITAL.—Mr. F. W. Webb, chief mechanical engineer of the London and North-Western Railway, has given £600 towards the cost of a new addition to the Crewe Memorial Cottage Hospital. Mr. Webb gave £1000 towards the cost of erecting the hospital. The late Mrs. Elizabeth Lodge of Southport has bequeathed £1000 to the Southport Infirmary.

A DIRTY HOUSE AT HARPURHEY, MANCHESTER.—A man employed at the Rochdale-road gas works, belonging to the Manchester Corporation, and his wife were charged at the Manchester City Police Court on Nov. 25th with neglecting their four children. Their house was in a most filthy condition "and had been so for years past." A number of animals—species not named—were kept in it and the inspector said the smell was like that of a menagerie. The floor was covered with cinders, cabbage refuse, mud, and dirt, and the children were filthy though not badly nourished. The mattresses on the three beds were rotten. All this seems to be the result of drink, partly on the man's part, but pre-eminently on the part of his wife. But while he was said to be industrious and gave her 25*s*. a week she gossiped and drank. The man's sister was called for the defence but said that she had not been in the house for 14 years because it was so dirty and things had been in the same condition for over 20 years. The female defendant was sent to gaol for three months and her husband was bound over for six months. Nothing is said as to what was to be done with the children. It was stated that the case had been under the observation of the officials of the National Society for the Prevention of Cruelty to Children for years and proceedings would have been taken earlier but for the fact that the man was thrown out of work for some time through the gas strike, in which he took rather a prominent part. The "observation" of the society does not seem to have done much good nor was the reason given for non-intervention quite conclusive.

YORKSHIRE POOR-LAW CONFERENCE. — The seventeenth annual Poor-law Conference for the Yorkshire District was held at Harrogate on Nov. 10th, under the presidency of Mr. Alderman W. Sheepshanks, J.P. Twenty-seven unions were represented at the conference and the delegates were welcomed by Dr. J. A. Myrtle, the mayor of Harrogate. The President, in his opening address, spoke chiefly upon the subject of old-age pensions and summed up his opinions as follows: (1) that if pension committees should be appointed as suggested by Mr. Chaplin's committee then the guardians should form the majority of each committee; and (2) that State pensions if granted should be confined strictly to the aged and deserving poor. Mr. J. G. M'Candlish, a guardian of the poor for Leeds, read a paper on Phthisis, urging the notification of phthisis, the sanatorium treatment by sanitary and municipal authorities, and if possible the treatment of incurable cases in separate buildings apart from union infirmaries. A discussion followed, after which Mr. T. A. Guy, a guardian of the poor for Bradford, read a paper on the Cottage Homes Bill and the Report of the Select Committee. Shortly, the Bill proposed that parish or urban district councils might, subject to the consent of the county council, provide and maintain a cottage home for the use of the necessitous and aged poor at or after the age of 65 years. Neither Mr. Guy nor the conference approved of the provisions of the Bill, mainly because it would pauperise people just as much as did the workhouse and it would be practically a censure upon the guardians for the way in which they performed their duties. It was decided to hold the next conference at Hull.

THE Governors of the London Hospital have secured a site at Whitstable-on-Sea for the erection of a convalescent home.

MEDICAL MAGISTRATE.—Mr. C. T. Ennals, M.R.C.S. Eng., of Louth, has been appointed by the Lord Chancellor a justice of the peace for that borough.

PRESENTATIONS TO MEDICAL MEN.—Mr. Whitfield Perkins, M.D. Durh., M.R.C.S. Eng., L.S.A., of Port Isaac, Cornwall, has been presented by the chaplain, officers, and members of the Hawkeston Institute holiday camp with an oak and brass revolving reading-desk and table in appreciation of his services as honorary medical officer to the camps of 1898 and 1899.

THE FOOD AND DRUGS ACT.—At the Malmesbury (Wiltshire) Petty Sessions a grocer of Minety was summoned under the Food and Drugs Act. Evidence showed that defendant had some packets labeled "Pure magnesia" for sale. The certificate of the county analyst showed that the article was "carbonate of magnesia" instead of "magnesium oxide" and was therefore of inferior quality and prejudicial to the purchaser. The defendant was fined 6*d*. and 9*s*. 6*d*. costs.

WATER-SUPPLY OF THE RHONDDA DISTRICT.—At the meeting of the Rhondda District Council held on Dec. 8th the medical officer of health (Mr. Herbert Jones) stated that he had submitted samples of the water from the Pontypridd Water Company to Professor Frankland who reported that the samples were all more or less turbid and possessed a peaty taste. Mr. Frankland added that the filtration was not efficient and he had found that the number of bacteria was actually greater in the filtered than the unfiltered samples.

NEW SEAMEN'S HOSPITAL FOR CARDIFF.—A very successful bazaar was held in Cardiff on Dec. 5th, 6th, and 7th in aid of the fund for the new seamen's hospital. £21,000 had been previously subscribed to the hospital and at the opening of the bazaar Mr. D. Thomas, M.P., stated that he had received £1000 from an anonymous donor towards the institution and added that the King of Italy had sent a very beautiful specimen of mosaic work. It is hoped that the bazaar will realise over £2000.

BRISTOL UNIVERSITY COLLEGE COLSTON SOCIETY.—The inaugural dinner of this society was held on Dec. 7th at the Clifton Grand Spa under the presidency of the Bishop of Hereford. The principal speaker was the Right Hon. J. Bryce, M.P., who expressed his confident expectation that there was a great future for the Bristol University College. During the course of the evening £365 were collected. This will be devoted to assisting the college in some manner which the committee of the society shall determine. Mr. Albert Fry was elected President for the coming year.

FREEMASONRY.—An ordinary meeting of the Rahere Lodge, No. 2546, was held at the Restaurant Frascati on Dec. 12th, W. Bro. Reece, M.D., W.M., in the chair. Bro. Sydney Cornish was admitted to the third degree and Bros. Bennett and Worth to the second degree. A vote of £100 was made from the funds of the lodge towards the relief of the sick and wounded, and the widows, and orphans of soldiers falling in the Transvaal war. 20 guineas were voted to the British Medical Benevolent Fund and a sum of £1 1*s*. was contributed towards the maintenance of "Our Brothers' Bed" at the Home for the Dying. A steward was appointed for each of the three masonic charities and a sum of £10 10*s*. was voted for the list of each steward. The brethren with their guests afterwards dined together.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, Charing-cross-road, London.
The Advance of Knowledge. By W. Sedgwick, Lieut-Col., late Royal Engineers. 1899. Price 6*s*.

APPLETON, D., AND CO., New York.
Notes on the Modern Treatment of Fractures. By J. B. Roberts, A.M., M.D. Illustrated. 1899.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
A Synopsis of the British Pharmacopœia. 1898. Compiled by H. W. Gadd. With Analytical Notes by C. G. Moor, M.A. Cantab., F.I.C. Fourth edition. 1899. Price 1*s*. net.
Dictionnaire des Termes de Médecine—Français-Anglais. Par H. De Méric. 1899. Price 4*s*. net.

BAILLIÈRE, J. B., ET FILS, Paris.
L'Appendicite: Formes et Traitement. Par A. Broca. 1900.

BLACK, A. and C., Soho-square, London.
Englishwoman's Year Book and Directory, 1900. Edited by Emily Janes. Twentieth year. Price 2s. 6d. net.
Who's Who? Fifty-second year of issue. Price 3s. 6d.

CARRÉ, G., ET C. NAUD, Paris.
Le Système Nerveux Central: Structure et Fonctions. Par Jules Soury. Vols. I. and II. 1899.

CHURCHILL, J. & A., Great Marlborough-street, London.
Therapeutic Electricity and Practical Muscle Testing. By W. S. Hedley, M.D., M.R.C.S. 1899. Price 8s. 6d.
The Practice of Medicine. By the late M. Charteris, M.D. Eighth edition. Edited by F. J. Charteris, M.B., Ch.B. Glasg. 1899. Price 10s.
Transactions of the Ophthalmological Society of the United Kingdom. Vol. XIX. Session 1898-99. With list of Officers, Members, &c. 1899. Price 12s. 6d.

CLAY, W. B., Teviot-place, Edinburgh.
Practical Text-book of Midwifery for Nurses and Students. By Robert Jardine, M.D. Edin., M.R.C.S. Illustrated. 1899. Price 6s.
Lectures on Hæmorrhage and Eclampsia. By Robert Jardine. Illustrated with two Plates. Reprint, with additions. 1899. Price 1s. 6d. net.

GRIFFIN, C., AND CO., Exeter-street, Strand, London.
Outlines of Bacteriology. By L. H. Thoinet and E. J. Masselin. Translated by W. St. C. Symmers, M.B. Aberd. 1899. Price 10s. 6d.
Dairy Chemistry. By H. D. Richmond, F.I.C. Illustrated. 1899. Price 16s.

J. B. LIPPINCOTT COMPANY, London and Philadelphia.
System of Diseases of the Eye. Edited by W. F. Norris, A.M., M.D., and Chas. A. Oliver, A.M., M.D. Vol. IV. With plates and illustrations. 1900. Price 21s. net.

JUNIOR ARMY AND NAVY STORES, York House, Regent-street, London.
The Western Rajputana States. A Medico-Topographical and General Account. By Lieutenant-Colonel A. Adams, M.D. Illustrated. 1899.

KARGER, S., Berlin.
Medicinisches Taschenwörterbuch der Deutschen, Englischen und Französischen Sprache. Von Dr. E. Lehfeldt. 1900.
Operations-Vademecum für den praktischen Arzt. Von Dr. E. Leser. 1900.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., Charing Cross-road, London.
The Evolution of General Ideas. By Th. Ribot. Authorised translation from the French. By Frances A. Welby. 1899. Price 5s.
The Mind of the Nation: A Study of Political Thoughts in the Nineteenth Century. By M. R. P. Dorman, M.A., M.D. Cantab. 1900.

KIMPTON, H., High Holborn, London.
The Diseases of the Nervous System. By Dr. Ludwig Hirt and others. Illustrated. 1899. Price 21s. net.
Operative Surgery. By J. D. Bryant, M.D. Vol. I. Illustrated. 1900. Price 21s. net.
Indigestion. By Thos. Dutton, M.D. Durh. Fifth edition. 1899. Price 3s.
The Nervous System and its Constituent Neurones. By L. F. Barker, M.B. Tor. Illustrated with two coloured plates. 1900. Price 25s. net.
The Health Resorts of Europe. By Thomas Linn, M.D. (of Nice and Aix-les-Bains). Seventh year. 1899.

LEHMANN, J. F., München.
Atlas und Grundriss der Unfallheilkunde. Von E. Golebiewski, in Berlin. 1900.
Atlas des gesunden und kranken Nervensystems. Von Dr. C. Jakob und Dr. A. von Strümpell. 1900.
Geburtshilfliches Taschenphantom. Von Dr. A. Mueller, in München. 1899.
Atlas und Grundriss der Speziellen Pathologischen Histologie, Von Dr. H. Durck. I. Band. 1900.

LONGMANS, GREEN, AND CO., Paternoster-row, London.
A Manual of Surgical Treatment. By W. W. Cheyne, M.B., F.R.C.S., F.R.S., and F. F. Burghard, M.D., M.S. Lond., F.R.C.S. In six parts. Part II. 1899. Price 14s.
Medicine, Old and New. By W. H. Dickinson, M.D., F.R.C.P. 1899. Price 2s. 6d.
Transactions of the Clinical Society of London. Vol. XXXII. 1899.

MACLEHOSE, J., AND SONS, Glasgow.
Renal Cases. A series of selected Clinical Reports and Surgical Studies. By D. Newman, M.D. 1899.

MERCK, E., Darmstadt, Germany, and 16, Jewry-street, London.
Merck's Manual of the Materia Medica. A Ready Reference Pocket-book for the Physician and Surgeon. 1899.

NELSON, T. AND SONS, Paternoster-row, London.
New Century Library. Vanity Fair: A Novel without a Hero. By W. M. Thackeray. 1899. Prices 2s., 2s. 6d., 3s. net.
The Posthumous Papers of the Pickwick Club. By Charles Dickens. 1899. Prices 2s., 2s. 6d., 3s. net.
The Life and Adventures of Nicholas Nickleby. By Charles Dickens. 1899.

NEWNES, GEO., AND CO., Southampton-street, Strand.
The Story of the Wanderings of Atoms, especially those of Carbon. By M. M. P. Muir, M.A. 1899.

PENTLAND, Y. J., Edinburgh and London.
The Principles of Treatment and their Applications in Practical Medicine. By J. M. Bruce, M.A., M.D., F.R.C.P. 1899.

PUBLISHED BY THE AUTHOR, J. S. CHRISTISON, 100, State-street, Chicago.
Brain in Relation to Mind. By J. S. Christison, M.D. 1899.

REBMAN COMPANY, Shaftesbury Avenue, London.
A Text-book of the Practice of Medicine. By Jas. M. Anders, M.D. Third edition. Parts I. and II. Illustrated. 1900. Two vols. Price 36s.
The Hygiene of Transmissible Diseases. By A. C. Abbott, M.D. Illustrated. 1899. Price 14s.
Minor Surgery and Bandaging. By H. R. Wharton, M.D. Fourth edition. Illustrated. 1899. 14s. net.
Diseases of the Eye. By G. E. de Schweinitz, A.M., M.D. Third edition. Illustrated. 1899. Price 24s.
A Text-book of Diseases of the Nose and Throat. By D. B. Kyle, M.D. Illustrated. 1899. Price 20s. net.
Surgical Anatomy. By J. B. Deaver, M.D. In three volumes. Vol. I. Illustrated. 1899. 36s. net.
Nervous and Mental Diseases. By A. Church, M.D., and F. Peterson, M.D. Illustrated. 1899. Price 28s.
An American Text-book of Surgery. Edited by W. W. Keen, M.D., and J. W. White, M.D., Ph.D. Third edition. Two vols. 1899. Price, two vols., 42s.
Practical Hints on the Analysis of Water and Sewage. By S. Barwise, M.D. Lond., D.P.H. Camb. 1899. Price 2s. 6d.
American Pocket Medical Dictionary. Edited by W. A. N. Dorland, A.M., M.D. 1899. Price 10s.

SAMPSON LOW, MARSTON AND CO., Fetter-lane, Fleet-street, London.
Twentieth Century Practice. Edited by T. L. Stedman, M.D. Vol. XVIII. 1899.

SCIENTIFIC PRESS, Southampton-street, Strand, London.
Surgical Ward Work and Nursing. By Alexr. Miles, M.D., C.M., F.R.C.S. Edin. Illustrated. Second edition. 1899. Price 3s. 6d.
The Nurses' Pocket Diary and Note Book for 1900. Price 1s.

SMITH, ELDER, AND CO., Waterloo-place, London.
Health Abroad. A Medical Handbook of Travel. Edited by E. Hobhouse, M.D. 1899. Price 6s.

STEINHEIL, G., Paris.
Manuel pratique d'Hygiène a l'usage des Médecins et des Etudiants. Par Dr. Guiraud. Deuxième édition. 1899.
Chirurgie du Rectum. Par R. Quenu et H. Hartmann. Tome II. 1899.

STUDENT VOLUNTEER MISSIONARY UNION, Warwick-lane, London.
The Healing of the Nations. A treatise on Medical Missions. Statement and Appeal. By J. Rutter Williamson, M.B. Edin. 1899. Price 2s.

TAYLOR AND FRANCIS, Red Lion Court, Fleet-street, London.
University College, London. Calendar. Session 1899-1900. 1899.

THE F. A. DAVIS COMPANY, Philadelphia.
Annual and Analytical Cyclopædia of Practical Medicine. By C. E. de M. Sajous, M.D., and others. Illustrated. Vol. IV. 1899.

THACKER AND CO., Creed-lane, London, E.C.
The Carlsbad Treatment for Tropical and Digestive Ailments. By L. T. Young, M.D., B.Ch., B.A. Second edition. 1899. Price 6s.

UNWIN, T. F., Paternoster-square, London.
Hermann Ludwig Ferdinand von Helmholtz. By J. G. McKendrick, M.D., L.L.D. 1899. Price 3s. 6d.

WRIGHT AND CO., Bristol.
The Medical Annual Synoptical Index to Remedies and Diseases. For the 12 years 1887 to 1898. Price 7s 6d. net.

Bale's Dental Surgeons' Daily Diary and Appointment Book, 1900. (J. Bale, Sons, and Danielsson, Great Titchfield-street, London, W.) Prices—plain, 7s.; interleaved, 8s. 6d.—A.B.C., Kursbuch der Fahrtfinder Auskunftsbuch. (A. Seligmann, 34, Leadenhall-street, London.)—Magazines, &c., for December: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Boy's Own Paper Christmas Number, Girl's Own Paper Christmas Number, World Christmas Number, and Pears' Annual, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Myra's Journal, Pall Mall Magazine, Windsor Magazine, English Illustrated Magazine, Knowledge, Humanitarian, Wide World Magazine, New Century Review.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BRICKWELL, J., M.R.C.S., has been re-appointed Medical Officer for the Stoke Sanitary District by the Eton Board of Guardians and Rural District Council.

CRAIK, WM., M.B., C.M. Glasg., has been appointed Medical Officer for the Bolton-upon-Dearne and Thurnscoe Sanitary District of the Doncaster Union, vice T. D. Nicholson, resigned.

DENNING, J. V. C., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Christchurch Workhouse of the St. Saviour's Union, vice J. Herron.

EDEN, THOMAS WATTS, M.D. Edin., M.R.C.P. Lond., has been appointed Physician to Out-patients, Queen Charlotte's Hospital, Marylebone, N.W.

GIBBES, LEWES, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Clinical Assistant to Waren Tay, F.R.C.S. Eng.

GOW, WM. J., M.R.C.P., M.R.C.S., M.D. Lond., has been appointed Physician to In-patients, Queen Charlotte's Hospital, Marylebone, N.W.

GRIGG, WM. CHAPMAN, M.D. Edin., M.R.C.P. Lond., M.R.C.S., has been appointed Consulting Physician to Queen Charlotte's Hospital, Marylebone, N.W.

HALL, B., M.B. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Lexden and Winstree Union, vice R. G. Naylor, resigned.

HALL, H. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Leigh Union, vice B. Jones, resigned.

HANSON, R. J. E., M.B., C.M. Camb., has been appointed Assistant Medical Officer for the Infirmary and Workhouse of the Parish of Paddington, vice M. F. Squire.

HARPER, JOHN MAURICE, M.R.C.S., has been appointed Surgeon to the Bath Police Force, vice H. Culliford Hopkins, deceased.

HERRINGHAM, W. P., M.D. Oxon., F.R.C.P. Lond., M.R.C.S., has been appointed Physician (Non-Obstetric) to Queen Charlotte's Hospital, Marylebone, N.W.

HIRST, G. S. S., M.B., C.M. Edin., has been appointed Medical Officer for the Withern Sanitary District of the Louth Union, vice A. Hanson, resigned.

JAFFREY, FRANCIS, F.R.C.S. Eng., has been appointed Lecturer on Anatomy at St. George's Hospital, London.

MACKAY, H. J. D., Medical Superintendent, Aston Hall, Sutton Coldfield, Warwickshire, has been appointed Licensee of the Old Park Retreat.

MORLEY, FRANK, M.R.C.S., L.R.C.P. Lond., L.D.S. Eng., has been appointed Dental Surgeon to Queen Charlotte's Hospital, Marylebone N.W.

NEWBERRY, W. J., M.R.C.S., has been appointed Medical Officer for the Overton Sanitary District of the Whitchurch Union (Hants), vice J. Willcocks, resigned.

O'FARRELL, H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer by the Guardians of the Portumna Union.

PATCH, H. H. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second and Third Sanitary Districts of the Hertford Union, vice W. T. Davies, resigned.

PERROTT, CHARLES JOHN, L.R.C.P., L.R.C.S. Irel., has been re-appointed Medical Officer of Health by the Kingswood Urban District Council.

POLLOCK, WM. RIVERS, M.B. Camb., M.R.C.P. Lond., M.R.C.S., has been appointed Physician to In-patients, Queen Charlotte's Hospital, Marylebone, N.W.

POMFRET, HENRY WAYTES, M.D. Viet., F.R.C.S. Eng., has been appointed Pathologist and Assistant Honorary Surgeon to the Ancoats Hospital, Manchester.

ROBERTS, CHAS. HUBERT, M.D., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Physician to Out-patients, Queen Charlotte's Hospital, Marylebone, N.W.

SHAW, A. H. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse and Frittenden and Cranbrook Sanitary Districts of the Cranbrook Union, vice J. W. Harris.

SOUTHEY, A. J., M.R.C.S., has been re-appointed Medical Officer for the Colnbrook Sanitary District by the Eton Board of Guardians and Rural District Council.

SOUTHWELL, C. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator for Stoke-on-Trent.

STAUB, ARTHUR FRANCIS, M.B., B.C. Camb., M.R.C.P. Lond. M.R.C.S., has been appointed Physician to Out-patients, Queen Charlotte's Hospital, Marylebone, N.W.

STEPHENSON, SYDNEY, M.B., C.M., F.R.C.S. Edin., has been appointed Ophthalmic Surgeon to Queen Charlotte's Hospital, Marylebone, N.W.

STOCKTON, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Brackley Union, vice W. H. Smith, resigned.

TAYLOR, SEYMOUR, M.D. Aberd., M.R.C.P., has been appointed Physician to the West London Hospital, Hammersmith-road, W.

TURNER, W. A., M.D. Edin., F.R.C.P. Lond., has been appointed an Assistant Physician, King's College Hospital.

WHEELER, W. A., M.D., B.S. Irel., has been appointed Medical Officer for the Milton Abbot Sanitary District of the Tavistock Union, vice R. N. de Beauvais, resigned.

WISE, T. F., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Ilsley Sanitary District of the Wantage Union, vice L. H. Bennett, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL ROYAL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House Surgeon. Salary £100 per annum, with rooms and attendance (not board).

CANNING TOWN MEDICAL MISSION.—Assistant Physician (woman). Apply to Resident Physician, 520, Barking-road, E.

CITY OF YORK.—Medical Officer of Health. Salary £400 per annum. Apply to the Town Clerk, Guildhall, York.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Resident House Physician for 12 months. Salary £30 per annum, with apartments and board.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, to reside and board in the hospital, unmarried. Salary £100.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeoncy for six months. Salary at the rate of £30 per annum, with board, residence, and washing.

GENERAL INFIRMARY, Leeds.—Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

GUARDIANS OF KENSINGTON.—Second Assistant Resident Medical Officer for the Workhouse and Infirmary. Salary £30 per annum, with apartments, board, and washing, subject to statutory deductions. Apply to the Clerk to the Guardians, Marloes-road, Kensington.

GUEST HOSPITAL, Dudley.—Senior Resident Medical Officer. Salary commencing at £100 per annum, rising by £10 a year conditionally, with board, residence, attendance, and washing.

HOLBORN UNION.—Assistant Medical Officer at the Infirmary, Archway-road, Upper Holloway, N. Salary £100 per annum, with board, lodging, and washing and (optional) allowance of £3 per annum in lieu of beer or mineral waters, subject to statutory deduction. Apply to the Clerk to the Guardians, Guardians' Offices, Clerkenwell-road, E.C.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians for six months. Honorarium £25 each.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant Surgeon.

KENT AND CANTERBURY HOSPITAL, Canterbury.—House Surgeon and an Assistant House Surgeon, unmarried. Salary House Surgeon £90 the first year, rising to £100 the second year, with board, &c. Salary Assistant House Surgeon £50, with board, &c.

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80, with residence and maintenance.

LONDON HOSPITAL, Whitechapel, E.—Dental Surgeon.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury, London.—House Physician. Salary £100, with board and apartments.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £120 per annum. Special arrangement for board, &c.

PARISH OF GAIRLOCH, Ross-shire.—Salary from the Parish Council £200 per annum, besides private practice. To reside at Poolewe. Apply to Mr. James Mackintosh, Inspector of Poor, Poolewe.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with rooms, board, and washing.

SEAMEN'S HOSPITAL SOCIETY, "DREADNOUGHT," Greenwich.—Senior House Surgeon for the Branch Hospital, Royal Victoria and Albert Docks, E. Salary £75 per annum, with board and residence, and an additional £25 per annum, conditionally.

ST. ALBANS RURAL DISTRICT COUNCIL.—Medical Officer of Health for the Rural District. Salary £100 per annum. Apply to the Clerk, Union Offices, St. Albans.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, London.—Honorary Assistant Medical Officer.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon. Salary £50 a year, with board, lodging, and washing. No stimulants supplied, in lieu of which £8 per annum will be given.

TOWNSHIP OF TOXTETH PARK.—Assistant Medical Officer for the Workhouse and Infirmary. Salary £100 per annum, with board, washing, and apartments, subject to statutory deduction. Apply to the Clerk to the Guardians, 15, High Park-street, Liverpool.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, and VICTORIA CONVALESCENT HOME, Broadstairs.—House Surgeon for six months. Honorarium £25, with board and lodging in the hospital.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard-street, Soho.—Resident Medical Officer.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Casualty Medical Officer. Honorarium £50 per annum.

Births, Marriages, and Deaths.

BIRTHS.

ARNOLD.—On Dec. 9th, at Alvaston, Sunderland-road, Forest-hill, S.E., the wife of Ernest Charles Arnold, M.B., F.R.C.S. Eng., of a daughter.

BARR.—On Dec. 7th, at Wentworth, Rotherham, the wife of Horace Carlos Barr, M.R.C.S., L.R.C.P., of a daughter.

DRAKE.—On Dec. 11th, at Lewisham High-road, Brockley, the wife of A. Thomson Drake, M.B., of a daughter.

MARRIAGES.

CARTWRIGHT—GILES.—On Dec. 7th, at St. Mary Abbot's, Kensington, Ernest Henry Cartwright, M.A., M.D. Oxon., Barrister-at-law, of Bower-terrace, Maidstone, to Dorothy, youngest daughter of the late Richard W. Giles, of Nevern-square, S.W.

COPEMAN—WILKIN.—On Dec. 6th, at Christ Church, Lancaster-gate, Alfred Heathcote Copeman, B.A. Cantab., M.R.C.S., L.R.C.P., of Cowes, Isle of Wight, to Eva Florence, only daughter of Sir Walter Wilkin, K.C.M.G., of Gloucester-square, Hyde-park, W.

VERNON—EWART.—On Dec. 12th, at All Saints' Church, Margaret-street, W., Horace Middleton Vernon, M.A., M.D., Fellow of Magdalen College, Oxford, to Katharine Dorothea, elder daughter of the late Rev. William Ewart, Vicar of Bishop's Cannings, Wilts.

DEATHS.

BUSS.—On Dec. 6th, Henry Buss, M.D., at Anwell, Ealing, in his 90th year.

DODDS.—On Dec. 8th, Ernest Ralph Dodds, M.D., of Brook House, Leyton, aged 27.

RENTON.—On Dec. 11th, at Shotley Bridge, Co. Durham, Geo. Renton, M.D. Edin., aged 56.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"BEWARE!"

WE have had further communications on the subject of the Anglo-American Insurance Company, Limited, since our reference to the proceedings of an advance agent of this company in THE LANCET of Dec. 2nd and Dec. 9th. We did not on previous occasions mention this company by name, but there is no reason for further concealment. We have now received the prospectus from different correspondents. We have read it and it reads well. Uncommonly well, indeed, for we see that the capital is to be £1,000,000, and that "assuming that branches in only 30 districts are established immediately by the company," the annual receipts, "less 33⅓ per cent. estimated cost of commission," will be £1,081,600. Capital £1,000,000, and net income over £1,000,000! As the arithmetic by which these figures are arrived at seems all right (to quote Humpty Dumpty), we think there may be something wrong in the assumptions. The £1,081,600 are to be divided thus: £540,000, it is estimated, will be absorbed in claims, £270,000 are to be placed to a reserve fund, and £270,000 are to be distributed as dividend in various proportions to the shareholders. As only £46,000 capital is are to be called up and as the ordinary shareholders will receive £133,590, arithmetic, again unimpeachable, says that the dividend on the ordinary capital would amount to about 300 per cent. There must be something wrong in the assumptions. We recommend all our readers who are approached on the subject to have nothing to do with the company, at any rate until some persons in positions guaranteeing their integrity make themselves responsible for the prospectus. The advance agent has used the names of Mr. Atherley-Jones as chairman, and of Professor W. R. Smith of King's College and of Sir William Mac Cormac as persons interested. Sir William Mac Cormac is out of reach, but the other two gentlemen should be requested by medical men who are canvassed to support the new venture to say what they know of it and how far and on what grounds they believe that it has before it the future sketched in the prospectus. It should be remembered that the advance agent has invited members of the medical profession to give him money and that in one case the circumstances as narrated to us, and by us to our readers, were very unsatisfactory. There is a question of ethics involved in the matter also. It is most unadvisable that the medical officers to a life or accident insurance society should all be shareholders in the company for which they have to examine lives. No medical man should embark upon this adventure until more is known about the persons responsible for its conduct, and certainly no one at this stage should give the advance agent money.

THE FINAL EXAMINATION FOR THE BACHELOR DEGREE IN MEDICINE AT LONDON UNIVERSITY: A GRUMBLE.

To the Editors of THE LANCET.

SIRS,—May I be allowed to call attention through the medium of THE LANCET to the very objectionable way in which the practical and *viva voce* portions of the M.B. examination at the University of London are carried out? At the last examination I was kept waiting from 1.30 till 5.30 P.M. on the first day and from 1.30 till 6.25 P.M. on the second day before I was called in to anything, I then had an interview with an examiner who detained me ten minutes. Then came another weary wait of an hour, after which I had a *viva voce* examination of five minutes' duration. This was my record for the first day. The second was worse. After waiting nearly five hours shut up in a room with a number of other unfortunates and fearing to go down and seek consolation in drinking tea in case we should miss our turns, tired and hungry, I was ushered in to be catechised by an examiner who sat and looked at me over his spectacles and a cup of tea and a plate of bread-and-butter. Having re-assured me thus, and also made me feel very thirsty, he talked to me very encouragingly for a few minutes and then dismissed me. After another wait in the corner of a large room, where I was carefully guarded and not allowed to speak to anyone, I had my practical pathology examination. We then were drafted into a passage where we waited another long and trying period, this time outside the very door of the torture chamber, so that we might, I suppose, gather strength and encouragement from the "blue" looks of the candidates who came out from being examined and most of whom seemed to have important engagements elsewhere as they hurriedly left the building without attempting to offer consolation of any kind to the tired and dejected-looking spirits still waiting to be tormented. At a few minutes before 8 P.M. I was at last ushered into the examination room, with a splitting headache, my stomach crying for food and my wits left outside. And then the examiners seemed surprised that I could not think of anything and told me I did not know my work! By this time the examiners were not in a mood to be trifled with, as they, too, I expect, wanted their dinner, in spite of the fact that here again there were abundant signs, in the shape of empty cups and saucers and plates, that they had not denied themselves refreshment during their labours. I need, therefore, hardly say that none of us appear to have greatly shone or said anything exceptionally brilliant. In my own case I know the brilliancy was all on the side of the examiners, both of whom very cleverly demonstrated to me, in a few short moments, that I was both an ignoramus and a fool. I staggered out of that chamber of horrors a perfect wreck of my former self, with my nerves shattered, and a naturally strong constitution (no one who has not this should be induced to go up for the London M.B.) temporarily ruined.

But what I should like to ask, Sirs, is this. Why should this scandalous state of things exist? That it is quite unnecessary is shown at once by the fact that in the *viva voce* examinations of the Conjoint Board no such state of things is possible, as every candidate has a card given him on which is clearly stated the exact time at which he is likely to be called. No reasonable being objects to being kept waiting on tenterhooks for half an hour, but when it comes to be five hours of mental torture it is surely time some notice were taken. The authorities at Burlington Gardens would probably ask why it is that no complaints are ever made about it. The reason is simply this. A successful candidate does not care to take the trouble, as he will not have to go through the suffering again, while the unfortunate candidate who is "ploughed" refrains because he knows it would be put down to the snarlings of a disappointed man who has come a cropper and wants to excuse himself. I have therefore taken upon myself the unpleasant and thankless task of criticising my "Alma Mater" in the interests of future candidates.—I am, Sirs, yours faithfully,

Dec. 5th, 1899. A SUCCESSFUL CANDIDATE.

IS IT A JOKE?

THE following medical article recently appeared as an editorial communication in the columns of the *Tewkesbury Weekly Record*. We do not see any evidence that it has been published as other than a serious communication and, at the risk of writing ourselves dull of comprehension, conclude that someone has hoaxed the editor of our contemporary.

WHAT WILL CURE A COUGH.

A cough is a work of intelligence of a current of electricity in a windpipe. An intelligent work of a current of electricity is performed in a cough. A cough is actually an attempt of a current of this influence to cast off a gathering of gas and water on the surface of the windpipe. The cough is only a spurting of a current out of a chest with such violence as to throw out all the unnatural encumbrance on the pipe. When a cough is made a contraction of the whole chest is made—just to the extent that a current is discharged by the cough.

The brain is not operated in this work. It often attempts to stop it, but it is a poor attempt, for it will nearly always fail. We are always in our senses when a brain is operated for an intelligent work. A cough is performed for a minute and sometimes for hours without consciousness on our part.

Mucous is a saturation of the water of a pipe by a gas from the stomach. It is but gas under water. A chance is offered in this understanding of the substance to obtain a remedy for a cough. A thousand doctors would see the remedy if it was known what mucous was.

Anything that will stop the generation of gas in the stomach will stop a cough. When a person is ill with a cold the stomach is sure to be out of order. The bad stomach permits a gas to be created. It can always be smelled. No cough is possible without a mucous in a pipe, or pus, and a mucous is impossible in a pipe without a gas from a stomach. Every cough other than that produced by a decomposition of lung, or bronchial pipe, is only a tickling of gas and water on a windpipe.

What is capable of stopping the creation of gas? A good condition of stomach is sure to stop it.

A glass of soda-water is the thing that will prevent a construction of mucous. It is all that is necessary, except to open a closed pore if it is not opened, and it is capable of curing a cough, and preventing a cold continuing. Let our readers try it. The gas discharged from a bad stomach passes through the nostrils and mouth. When a breath is inspired, some of the gas is drawn into the wind and all the pipes of the chest, and mixed with the water in the pipes. If the gas is discharged for a great length of time it will create a sore nose and what are called canker or cold sores on the mouth and lips. Those sores are only a poisoned tissue.

A cough will sometimes continue as a result of a cold or closing of the pores of the body for months or weeks, and finally give a corrosion to the bronchial pipes and lung. When this is the character of the cough, a constant disorganisation of the process of digestion is possessed. Just the same condition of disordered digestion as was first produced by cold. An opening of pores is still wanted, and it must be performed.

GYMNASTIC BELTS.

To the Editors of THE LANCET.

SIRS,—My brother, Mr. Herbert Smith, M.R.C.S. Eng., L.R.C.P. Lond., has called my attention to your interesting annotation on the subject of gymnastic belts. If a lay opinion is not out of place in your pages will you permit me to give mine from the practical gymnast's point of view? I am inclined to agree with what you say as to the use of gymnastic belts by boys at school. In my capacity of gymnastic instructor and drilling master in connexion with schools and Boys' Brigade work I have always discouraged the use of such belts as those to which you refer, my contention being that, under wise supervision, a boy may be so trained as never to require artificial support such as belts are supposed to give,

while the fact that such support is sought after by quite young people seems to indicate that these young people are the victims of a bad system of instruction, or that they never will be suitable subjects for anything like steady and sustained gymnastic effort, no matter how plucky they may be. There is too great a tendency in our gymnasia, both public and private, to emulate the feats so splendidly performed in our circus rings by professionals whose life-long training alone enables them to do such things with comparative ease and apparent impunity. I say "apparent" advisedly, since it is a notorious fact that the majority of these gymnasts soon become prematurely aged and are frequently martyrs to muscular rheumatism and similar ills in after life which make existence hardly worth the having. Under a wise system of instruction gymnastic belts should never be found necessary. Indeed, the very training itself should render the pupil quite independent of artificial support, because during his training nature is furnishing him with a belt or corset of muscle compared with which any artifice of the most skilled surgical machinist is a very poor thing indeed. Certain exercises on the vaulting horse and others on the parallel bars, though showy and pretty, are possible, nay, probable, sources of mischief and should not be persisted in, and it is far better to discontinue such exercises than to adopt a belt in order to make the performing of these quite useless exercises the more easy. I agree with you that under certain conditions the broad unyielding belt we sometimes see worn is a source of danger rather than of safety, and a lad who has got into the way of trusting to his belt seems scarcely ever to be quite comfortable without it. When superintending the training of crews for boat-racing I have always insisted on every artificial support of the "waist" being given up, and also if there should be some competitors who cannot go on without such support, I have done my best to get rid of them altogether. Under the present condition of boat-racing with long slides you, Sirs, do not need to be told the possible consequences of the abuse of artificial support of the loins. If tailors would only cut their garments in a sensible manner there should be no need even for a slight waistbelt to sustain the trousers or knickers, and the sooner we get an improvement in this direction the sooner we shall rid ourselves of what is often the encouragement to wear gymnastic belts with the mistaken notion that they strengthen the loins. So far from that being the case such a practice is more likely to allow the loins to become abnormally weak.

I am, Sirs, yours faithfully,

Bath, Nov. 20th, 1899. FRANK SMITH.

"OBSTRUCTION OF THE INFERIOR VENA CAVA, PROBABLY SYPHILITIC."

To the Editors of THE LANCET.

SIRS,—May I ask through THE LANCET what specific treatment Dr. C. W. Chapman put his case on? The case is reported in THE LANCET of Dec. 2nd, Clinical Society Proceedings, p. 1521. Hoping this note will catch his eye,

I am, Sirs, yours faithfully,

Dec. 6th, 1899. X. Y. Z.

"A SAD AND URGENT CASE."

To the Editors of THE LANCET.

SIRS,—Dr. Macnaughton-Jones has received the following sums in answer to the appeal in your columns headed "A Sad and Urgent Case." Will you be so kind as to acknowledge their receipt in your columns?

I am, Sirs, yours faithfully,

LILIAN GASK.

131, Harley-street, Cavendish-square, Dec. 12th, 1899.

	£	s.	d.
L.R.C.P.I. (Birmingham)	0	5	0
Mr. H. Pulling	1	1	0
"Well-wisher"	2	0	0
Inspector-General Stanistreet, R.N.	1	1	0
Professor Clifford Allbutt, F.R.S.	1	1	0
Mrs. Swanson	1	1	0
Dr. H. Lupton...	1	1	0
Dr. Cooper Stawell... ...	2	2	0
Dr. H. Coates	5	5	0
H. S.	2	2	0
Sir Francis Cruise	1	1	0

THE BRITISH WEATHER CHART, 1900.

WE have received a forecast of the weather for 1900 mapped out by Mr. B. G. Jenkins, F.R.A.S. Mr. Jenkins is not a cheerful prophet—in fact, most of his weather is so disagreeable that we can only pray he may be wrong in most of his forecasts. Thus May is to be cold and unsettled except during the last week; June is pretty fair, but there is to be a gale on the 5th; July commences fine and gradually becomes unsettled with a severe gale on the 23rd: August is stormy about the 11th and unsettled during the last half; September is very unsettled during the first half; October commences with gales and ends up with fogs and snow; November varies from gales to fogs, and so does December. The earlier months ring the changes upon storms, fogs, gales, "depressions," and snow.

"A PUZZLING CASE."

To the Editors of THE LANCET.

SIRS,—A man was awaked by violent cramp in his left calf. While the pain was still very acute he got out of bed to micturate. While stooping to replace the utensil he had been using he fell on the floor and for a few seconds was absolutely unconscious. He then got up without help and was none the worse and he remains quite well. He is a healthy man, leads a regular, active, and outdoor life, is a total abstainer, smokes only cigars and only one every night after he has done his work. Has never been confined to bed with any illness, has pronounced varicose veins in the left leg, has varicocele, and is occasionally troubled slightly with hæmorrhoids. All his organs are healthy. His heart is sound, but under excitement it beats very forcibly. He is myopic. He is very intelligent and energetic, and has played in his younger days football and tennis. He is a good walker and can go up hill as well as any man. He has had for 25 years an occasional twinge of pain a little above and to the inner side of the left nipple. He is now 40 years old. There is no history of syphilis and his family history is extremely good. It is to me a case of great perplexity; and I hope that you or some of your readers will help me to solve the mystery. What was the cause of the unconsciousness? and what preventive treatment can I adopt?

I am, Sirs, yours faithfully,

Dec. 12th. PERPLEXED.

**** Loss of consciousness is not uncommon under the circumstances mentioned by "Perplexed"; the sudden change of position and the sudden diminution in abdominal pressure leads to cerebral anæmia, so producing giddiness or even unconsciousness.—ED. L.

"AMERICAN INSURANCE SOCIETIES."

To the Editors of THE LANCET.

SIRS,—I am afraid that "A Victim" who writes in THE LANCET of Dec. 9th may be in some sense at least self-immolated—that is, suffering unnecessarily and from his own ignorance. I can only speak with certainty for the company in which I am insured, the Mutual Life Insurance Company of New York (by which, however, the largest number of American policies current in this country has been issued). Any insurer in the "Mutual" who finds himself in the position of "A Victim" need only write to the head office in England to learn that since the Inland Revenue authorities do not remit the income-tax on American policies, the company puts its policy-holders right by refunding the amount of income-tax paid. While your correspondent's statement as to the Inland Revenue practice is thus correct his conclusion is entirely unjustified and is unfair to American companies, as far at any rate as concerns the one whose practice in the matter I know. I would suggest to "A Victim" that it is more in keeping with the scientific spirit, which should animate a medical man, to make sure of all the facts of the case before penning a sentence which by implication classes great and honourable financial institutions along with the latest form of the confidence trick.—I am, Sirs, yours faithfully,

S. WM. CARRUTHERS, M.D. Edin.

Central-hill, Norwood, S.E., Dec. 11th, 1899.

A. and B.—The agreement was entered upon when A began to introduce his patients to B. A cannot therefore set aside the agreement without B's permission. If the sum to be paid by A to B as damages in case of rupture of the agreement is larger than the sum to be paid by B to A for purchase of the practice A would not expose himself to misconstruction by breaking off negotiations, but we strongly advise that whatever arrangement is come to it should be come to by mutual consent.

Medical Expert.—If a case can be brought into court where the man has received money pretending that he has medical qualifications which he has not he can be convicted of obtaining money under false pretences. We cannot say what a particular magistrate might think of his brass shield; some would fine him and some would not. The facts of the case should be submitted to the Medical Defence Union or to the London and Counties Medical Protection Society.

Puzzled.—We cannot "decide" the question; we can only discuss it and give our views on the correct method of style under existing conditions. The matter was brought before the General Medical Council at its recent session by one of the Direct Representatives who gave expression to a feeling that is very general in favour of our correspondent's views.

Hair.—We recommend that no patient should be sent to the individual whose name does not appear on the Medical Register. We have never heard of his book.

Delta should write to the secretary of the Society of Apothecaries as to the Society's requirements. The practical knowledge can only be obtained by experience.

During the week marked copies of the following newspapers have been received: *Glasgow Herald, Sheffield Daily Telegraph, Chorley Standard, Liverpool Journal of Commerce, Hull Daily Mail, York Daily Herald, Scotsman, Liverpool Daily Post, Daily Mail (London), Bradford Observer, Newcastle Daily Chronicle, New York Sun, Times of India, Pioneer Mail, Citizen, Morning Herald (London), Leeds Mercury, City News, Manchester Chronicle, Mining Journal, Builder, Architect, Bristol Mercury, Yorkshire Post, Brighton Gazette, Wolverhampton Chronicle, Bromyard News, Sanitary Record, Bristol Times, Midland Mail, Accrington Observer, Madras Times, Sunderland Morning Mail, Scottish Critic, Cork Herald, Levant Herald, Hertfordshire Mercury, Local Government Chronicle, Reading Mercury, City Press, Warwick Times, Sketch, Paris Messenger, Huddersfield Chronicle, Loughborough Examiner, Naval Military Record, Hearth and Home, Washington Post, Surrey Advertiser, Weekly News Advertiser (Vancouver), Evesham Journal, Leicester Daily Post, Manchester Guardian, St. Pancras Guardian, &c., &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 14th, 1899.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Dec. 8	29·82	S.E.	0·02	61	50	37	36	38	Cloudy
" 9	30·20	E.	...	55	49	35	34	36	Cloudy
" 10	30·19	E.	...	46	37	34	32	34	Cloudy
" 11	30·09	N.	0·02	36	35	32	32	33	Cloudy
" 12	29·75	S.E.	0·08	38	36	30	Fzn.	34	Overcast
" 13	29·68	S.	...	46	36	33	32	34	Overcast
" 14	29·54	N.E.	...	39	33	28	Fzn.	29	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), King's College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.). Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 8 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.) Cancer (2 P.M.)

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College 2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 8 P.M.).

SATURDAY (23rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (2.15 P.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (19th).—CHELSEA CLINICAL SOCIETY (Holy Trinity Parish Hall, Pavilion-road, Sloane-square, S.W.).—8.30 P.M. Ordinary Meeting. Papers:—Dr. S. B. K. Mullick: A Practical Demonstration in the Use of Electricity in Diagnosis and Prognosis in some Forms of Paralysis.—Dr. A. S. Eccles: Some Recent Cases of Enteroptosis.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Adjourned Discussion on Dr. Mott's paper on the Pathology of Tabes and its Relation to General Paralysis. Dr. Beevor and Dr. Head will re-open the debate. Dr. N. Pitt, Dr. Ormerod. Dr. Salaman, Dr. Risien Russell, Dr. P. Stewart, Dr. R. Jones, Dr. B. Abrahams, Dr. F. Beach, and others will speak. Dr. Mott will reply.

WEDNESDAY (20th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Paper:—Mr. B. J. Spitta: A Review of Photomicrography and its Different Methods (illustrated by numerous lantern slides).

ROYAL METEOROLOGICAL SOCIETY (Institute of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Ordinary Meeting. Papers:—Mr. B. Latham: The Climatic Conditions necessary for the Propogation and Spread of Plague.—Mr. R. Scott: Note on a Remarkable Dust Haze experienced at Teneriffe, Canary Islands, February, 1898.

THURSDAY (21st).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road).—8.30 P.M. Dr. Watson Cheyne: Genito urinary Tuberculosis.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. A. Whitfield: Consultation. (Skin).

TUESDAY (19th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-sq., W.C.).—3.30 P.M. Mr. Horsley: Surgery of the Nervous System.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Sir W. H. Broadbent, Bart.: Consultation. (Medical.)

WEDNESDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, (22, Chenies street, W.C.)—4 P.M. Mr. J. Berry: Consultation. (Surgical.)

THURSDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, (22, Chenies-street, W.C.).—3 P.M. Dr. Woods Hutchinson: Class. Comparative Pathology. Demonstration VI. 4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

FRIDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—2 P.M. Mr. A. Cheatle: Consultation. (Ear.)

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them. Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

Communications, Letters, &c., have been received from—

A.—Dr. J. Althaus, Lond.; Messrs. Allen and Hanburys, Lond.; A. P., Brighton; American Tobacco Co., Lond.; Messrs. S. Allsopp and Sons, Burton-on-Trent.

B.—Surgeon R. F. Bate, R.N., Chatham; Messrs. J. Bale, Sons, and Danielsson, Lond.; Birkbeck Bank, Lond., Assistant Manager of; Messrs. Bellman, Ivey, and Carter, Lond.; Mr. C. Birchall, Liverpool; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. Julia Bissell, Nasagon, India; Bristol Royal Hospital for Sick Children, Secretary of; Dr. J. Aldrich Blake, Lond.; Dr. G. S. Brock, Rome; Dr. Lauder Brunton, Lond.; Bibliotheca do Club Recreativo, Sta. Victoria; Mr. P. E. Besant, Lond.; B. and S.; Mr. V. Benoist, Lond.; Borough of Colne, Lancashire, Hon. Secretary of; Messrs. Burgoyne, Burbidges, and Co., Lond.

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